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**INTRODUCTION TO
PHYSICAL EDUCATION**

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BY

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*Dedicated to my sons
Jack and Lewis
with the hope that society will
provide ever more intelligently
for the recreational interests
of boys and girls*

PREFACE

This book was written to meet the need for a comprehensive general textbook on physical education. While many volumes in this field have been published during the past few years, no one of them has been a broad general treatise. In order for one to get a comprehensive view of physical education, therefore, it has been necessary to refer to many different books and magazine articles. This book provides enough material in one volume to enable a person to understand the scope and significance of physical education.

It is believed that the book will be of especial value in courses designed to accomplish a professional orientation of physical education students. For students taking their major work in physical education it may well be used as a textbook during the semester immediately preceding the work in directed teaching. The book will fill an urgent need, also, in professional physical education courses which are designed to prepare classroom teachers who in most cases are required to teach the physical education work for their pupils. The certification requirements in many states and the curriculum requirements in most teachers' colleges specify that prospective classroom teachers must complete at least one general professional course in physical education. There has not been available up to this time a textbook suitable for use in such courses. This volume, therefore, should meet a need that exists in colleges engaged in the professional preparation of physical education teachers and also in institutions that are primarily concerned with the preparation of classroom teachers.

Adequate attention is given in this book to the explanation of the sociological basis of physical education and to the historical development of the influences which have helped shape the present-day program of physical education. The relatively large amount of illustrative material that has been included makes it easy for the reader to understand and apply the content of the book. The material has been carefully chosen in respect to scientific accuracy, but throughout the presentation the emphasis has been placed on the practical application of the data to teaching situations. A continuous and comprehensive view of physical education for the entire school system has been provided in the arrangement of the material.

The content is organized in units which have been based on an

analysis of the school situations that are met by teachers. By using material organized in this way students get a clearer and more functional comprehension of the entire field of physical education. Among the teaching helps provided in the book are the questions and the selected lists of references included at the end of each chapter.

Acknowledgment is hereby gratefully made to the many authors and publishers whose works are cited in this volume. The author also acknowledges his indebtedness to his students over a period of years for the stimulation provided by them; to his colleagues, Professors George L. Jackson and John Haldi for reading and helpful criticism of parts of the manuscript, and Mr. Warren R. Good for valuable suggestions concerning the preparation of the entire manuscript.

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INTRODUCTION TO PHYSICAL EDUCATION

CHAPTER I

THE FUNCTIONAL BASIS OF PHYSICAL EDUCATION

Physical education and social change. Physical education, in common with all other parts and activities of life, is shaped by the changes that take place in society. Every period in the history of the world has witnessed social changes; during some periods a great many changes have taken place, while at other times society has remained almost static. The first three decades of the present century have been fraught with more great social changes than has any period of the same length in the world's history. The events which accompanied these changes have brought into existence many problems and raised many questions.

The organizations and institutions of American society have developed at different rates and have attained to different degrees of growth.¹ Agriculture, for example, has changed rapidly in the past twenty-five years, but it has lagged far behind the change and development in industry. Within each organization of society there has been unevenness of development. The institutions of society in which unsynchronized change is taking place are the home, the church, the school, the government, and practically all activities of an economic nature. The church no longer occupies its former position of relatively great importance as a source of authoritative guides to living. The school has been forced to assume many of the responsibilities which at one time were carried by the home, the church, and other social institutions. The home has transferred most of its economic functions to the factory, its educational functions to the schools, and many of its nutritional responsibilities to the manufacturers of canned and package foods. The development of labor-saving devices in the home has taken place so rapidly that it has been difficult for most homes successfully to make the necessary adjustments. The demands on our governments for services have grown more rapidly than the willingness and ability of the people to pay the cost of the expanded services. In manufacturing, gains in production have far exceeded our

¹ *Recent Social Trends in the United States*, Vol. I, p. xv. Report of the President's Research Committee on Social Trends. New York: McGraw-Hill Book Company, Inc., 1933.

ability satisfactorily to distribute the manufactured articles. The development of the automobile industry has resulted in many changes and has brought many new influences to bear on road building, the railroads, the urbanization of population, the manners and morals of large numbers of people, and the types of home life in America.

Physical education must take cognizance of the changes that have taken place and are now taking place in American society. It must seek to help persons adjust successfully to the social group in which they are living. In order to do this, teachers of physical education must plan and adjust their programs to meet the needs of individuals who are living in present-day society. They must not turn their backs to the sun and conclude that its main function is to cast shadows.¹ They must realize that the light which flows from a knowledge of social conditions supplies one of the best guides to conscientious educational effort. They must have a faith in physical education if they are to bring about desirable changes in their pupils and to help them enjoy and share more of the true pleasures in life. A contribution toward these ends may be made through physical education by widening the ability of people to participate in recreational activities, by providing a variety of interests, by encouraging relaxation and change of activity, by helping in the development of vitality through wholesome vigorous physical activity, and by providing opportunities for the satisfying expression of many natural interests, urges, desires, and instincts.

The need for physical education in modern society. The social trends which are observable in American society indicate that there is an increasing need for physical education in all the schools of the country. The home, which is the fundamental integrating unit of society, takes care of relatively fewer interests and needs than it did for previous generations. In many families all the members now get most of their education, recreation, and social contacts outside the home. Practically all activities directed toward earning a living are carried on away from home. In fact, most of the wants and desires of American people are being satisfied to an increasing degree in situations removed from the home.

Industry has become highly mechanized, and most of the human functions involved are routinized to a great degree. The opportunities for an individual worker to find any great satisfaction through his work are limited. It is through avocations, recreations, and hobbies that the majority of people must find opportunities for wholesome self-expression and creative activity.

With the development of machinery for use in industry, in agricul-

¹ For an interesting development of this philosophy. see Kahlil Gibran, *The Prophet*, p. 52. (New York: Alfred A. Knopf, 1928.)

ture, and in the home has come increased leisure for a large proportion of the population of the country. This great amount of leisure time for so many people, including children, youth, and adults, offers possibilities for enriched living and cultural growth. It also may prove to be a real detriment to many individuals and to society. If most persons were prepared to spend leisure time in a variety of profitable and wholesome ways there is no doubt that a large amount of leisure time would be a real blessing. It is true, however, that "Americans have but scanty traditional equipment for amusing themselves gracefully and wholesomely."¹

Available data on the vitality of the American people indicate that the opportunity is open for physical education to make a big and valuable contribution to the efficiency and the ability of the present and succeeding generations to enjoy life. Life expectancy has increased greatly in the United States in the past three decades. This increase in the average age of Americans at death has been due largely to a reduction in the mortality rate of infants and young children. The important problems in the conservation of vitality in this country involve (1) the reduction of the relatively high incidence of illness at all ages, except in late childhood and adolescence; (2) the correction of the causes which result in nearly 5 per cent of the babies who are born in America "becoming so mentally diseased in adult life as to require admission to some institution"; and (3) the discovery of "the causes of organic breakdowns of the heart and circulatory system, the kidneys and entire alimentary mechanism among persons over forty years of age."² While there is no mass of scientifically authenticated evidence to prove that physical education activities or health instruction can make any improvement in the vitality of the people, it is a widely accepted belief that such procedures can make a worthwhile contribution to this end. It is hoped that further research will make clearer the possibilities of such improvement.

It is apparent, in view of the change in character and functions of the American home, the mechanization of industry, the increasing amount of leisure, and the prominent unsolved problems of race vitality, that there is a real need for a complete program of physical education in all the schools in the nation.

The distribution of population. The percentage of the population which is rural and urban, the density of population in different areas, the development of metropolitan communities in connection

¹ *Recent Social Trends in the United States*, Vol. I, p. 11. Report of the President's Research Committee on Social Trends. New York: McGraw-Hill Book Company, Inc., 1933.

² Edgar Sydenstricker, "The Vitality of the American People," *Recent Social Trends in the United States*, Vol. I, pp. 658-59. Report of the President's Research Committee on Social Trends. New York: McGraw-Hill Book Company, Inc., 1933.

with big cities, the proportion of children to adults in the population, and the percentages of children of different ages who are engaged in industry, are all factors which have some bearing on physical education.

In the nation as a whole, the part of the population which is classed as urban is larger than the rural. More people are engaged in manufacturing than in farming. These facts would seem to indicate at first sight that education and physical education are now predominantly concerned with the problems of a highly centralized industrial society. There are other facts, however, that must be taken into consideration. The United States census reports class as urban any community with a population of 2500 or more. It is not accurate to conclude, therefore, that more than half the American people live within the corporate limits of large cities. In approximately three-fifths of the states more than half the people are rural. Judging by present trends it seems likely that a majority of the population in at least half the states of the Union will remain rural for at least the next twenty years. In thinking of physical education in terms of the needs of the population, therefore, it must be recognized that the rural, village, and small town communities are important factors in our social organization and are likely to remain so for a number of years.

The developments of metropolitan regions around the larger cities of the country has created social, governmental, recreational and educational problems that are different from those found in cities, towns, or rural districts. It seems probable from the present rate of growth that these areas will continue to increase in population and before many years will contain a significant proportion of the entire population of the country. It appears that, as a whole, these rather thickly populated suburban communities have made relatively little progress toward the solution of the problems of financing and controlling their schools and other social institutions. The question of how to finance public schools adequately in these communities is particularly important. Often the schools are largely dependent for support on the income from real estate taxes. The real property consists in nearly all instances of moderate priced dwellings. The people are usually an intelligent class who want good schools for their children. Since the total assessed valuation of the property in these communities is relatively small in comparison to the type of educational services desired by the people, it is quite difficult in many situations to secure adequate funds to support the school program. The use of larger political units such as the county or state, rather

than the district or community, for the support and control of schools would help to solve this problem. This reorganization would make it possible to collect the tax money where the wealth is concentrated and to spend it where the children are.

The decrease in child population. The proportion of children in the population of the United States is diminishing. The census of 1930 showed fewer children under five years of age than the preceding census. The decrease was particularly noticeable in children under one year of age. These data reflect the declining birth rate in this country and indicate that the number of children in the public schools will probably become stationary or decrease. In some cities the number of children in the first grade has become smaller. This decrease in the child population is not observable yet in the upper grades of the elementary schools, or in the high schools. Unless a larger percentage of the total number of children remain in school for a greater number of years, the decline in the number of children will become evident in these higher grades within a few years. It is impossible to make an accurate prediction of the social and educational results of this diminishing birth rate, but it should be possible to provide better care and education for the relatively smaller number of children.¹

Since 1910 the percentage of the total number of children engaged in gainful occupations has steadily decreased. Judd² has suggested that this decrease has been due to both practical and humanitarian considerations. From a practical point of view it has become less necessary and desirable to employ children in industry because the ratio of adults to children in the total population has been increasing over a period of years. It was also recognized to be hazardous and unhealthful for children to be engaged in intensive industrial and commercial labor. Since the number of children engaged in industry is decreasing and will probably continue to decrease, society must provide for them in some way. This elimination of children from gainful employment has been one of the reasons why the high school enrollment in America has increased so rapidly in the past twenty years. A continued decrease in the percentage of children in industry may result in having still greater numbers remain in school for a longer period of time. This extension also causes a greater range of ability, talents, and interests among the pupils in the schools; which

¹ *Thirteenth Census of the United States (1910)*, Vol. I, *Population*, Table 28, p. 806; *Fourteenth Census of the United States (1920)*, Vol. II, *Population*, Table 4, p. 157; *Fifteenth Census of the United States (1930)*, preliminary reports.

² Charles H. Judd, "Education," in *Recent Social Trends in the United States*, pp. 327-28. Report of the President's Research Committee on Social Trends. New York: McGraw-Hill Book Company, Inc., 1933.

in turn would necessitate some change in the type of school organization and a broader curriculum offering.

The values of physical education. It has been shown in the preceding paragraphs that the way in which American society is developing points to the need for physical education in all schools. The available objective evidence concerning the values of a well executed program of physical education indicates that such a program can be of benefit to many persons. A summary¹ of some of the objective evidence of the values of physical education shows (1) that participation in physical education activities stimulates growth; (2) that health education programs in schools influence the rate of gain in height and weight; (3) that physical education aids in correcting dysmenorrhea; (4) that there is a definite relationship between physical proficiency and scholastic achievement; (5) that participation in athletics is not detrimental to health or scholastic standings; (6) that physical education develops abilities and traits not dealt with by the traditional classroom subjects; (7) that programs of physical and health education in schools reduce absences and retardation; (8) that physical education improves posture; (9) that the most favorable opportunities exist in physical education for developing desirable character traits; and (10) that unusual possibilities exist in physical education for affecting normal personality adjustments.

The following statement by the National Committee on Physical Education summarizes well the needs and values of physical education in present-day society.²

I. Human vitality is partly hereditary and partly developmental. The power of vital organs is therefore dependent upon the developmental physical activities of the young. In a sedentary and industrialized society physical education is peculiarly indispensable for the development of the vital organs of children and for the adequate functioning of these same organs in adults.

II. Leisure time has increased tremendously in the last decade, and every indication points to a shortening of the working day. There will be leisure in amounts undreamed of a generation ago. This calls for types of education that will serve the play time of the whole population. Therefore, in our modern world physical education for leisure time becomes indispensable.

III. Physical education is indispensable also for the normal growth and development of youth. When children and young people are denied the growth and health that comes from physical activities in educational institutions or in community life, the saving in such expenditures will be more than offset by the increase of costs for hospitals, reformatories, and jails.

¹ David K. Brace, "Some Objective Evidence of the Value of Physical Education," *Journal of Health and Physical Education*, IV (April, 1933), 38.

² Jesse Feiring Williams (chairman), "Physical Education Today—A Statement by the National Committee on Physical Education," *Journal of Health and Physical Education*, IV (March, 1933), 4.

IV. At one time education was merely a training of the mind, but the idea is everywhere gaining ground that education must deal with the whole man and not with just part of him. Out of this conception has come the conviction that the good life exhibits play, laughter, recreation, and joy not as competitors with mental accomplishments, but as essential elements in full and fine living. For this physical education is indispensable.

The scope of physical and health education. In many schools physical education and health education are combined for convenience in administration and instruction. The specific objectives and goals of these two fields are not the same, although the main general aim is similar for both. In fact, the general aim of all educational activities should be practically the same. The subject matter of these fields is made up largely of material taken from biology, sociology, and education. Experience has indicated, however, that the techniques of organization, the methods of presentation, and the practical problems involved are peculiar and different to such a degree that it is advisable in most school situations to organize physical and health education as a single instructional and administrative unit.

The school program of health education is usually considered under the three headings of health service, health supervision, and health instruction. Health service includes the service usually rendered by physicians and nurses; it is directed toward the prevention and control of communicable diseases, finding the health status of each child by means of medical examinations, and observing the changes in the health status of each child from year to year. Health supervision is concerned with the educational plant and processes and their effects on the health of the pupils and teachers. Health instruction attempts to supply information and to develop habits, attitudes, and ideals which will help each individual to live in a way that will be conducive to personal and community health.

The physical education program in schools is concerned with the education of boys and girls through vigorous motor activities. It attempts to influence and modify for the better, the behavior of the pupils. It is particularly interested (1) in providing opportunities for the wholesome expression of the natural interests and desires of children, thereby contributing to the development of desirable character and personality traits; (2) in the development of the organic systems of the body; and (3) in developing skill in, and fondness for, activities that may serve as recreational interests during leisure time.

The following outline indicates what should be included in a school program of physical and health education.

PROGRAM OF PHYSICAL AND HEALTH EDUCATION

1. *Health Service:*
 - a. Health examination of pupils
 - b. Correction of defects through coöperation of the home
 - c. Protective measures against disease (this includes vaccinations and inoculations)
 - d. First-aid services
 - e. Dental prophylaxis
 - f. Health examination of teachers and of teachers in training
2. *Health Supervision:*
 - a. Hygiene of instruction, including such factors as the organization of the program, the hygiene of school supplies and equipment, and home work
 - b. Heating
 - c. Ventilating
 - d. Lighting
 - e. Sanitation
 - f. Housekeeping
 - g. Safety measures
3. *Health Instruction:*
 - a. Class instruction in health, hygiene, and physiology
 - b. Health projects; such as morning inspection, weighing and measuring, supervised lunch, Blue Ribbon projects, Health Crusaders, and safety councils
4. *Physical Education:*
 - a. Marching
 - b. Individual gymnastics
 - c. Rhythmic activities
 - d. Apparatus work
 - e. Games of low organization
 - f. Stunts
 - g. Water activities
 - h. Athletics
 - i. Team games
 - j. Dramatics
 - k. Outing activities
 - l. Relaxation periods

The ideals of physical and health education. In order to think clearly on any problem we must have well defined ideals by which to guide our thinking. In scientific research, for example, an acceptable ideal might well be to permit only the very best and most accurately authenticated data to influence one's conclusions. In re-

gard to social and moral problems a person's decisions might be made in terms of what is right as measured by the principle that "that which works for the greatest good of the greatest number over the longest period of time is right."¹ In the consideration of physical and health education it is likewise essential that educators have some guiding principles.

In connection with a project in curriculum construction in physical and health education for the Ann Arbor public schools a Committee on Ideals was appointed. The following report by this committee of teachers serves as an illustration of a good statement of principles for the guidance of teachers in their thinking in this field.²

Health is fundamental to a happy life. Along with economic independence it forms the ground-work of moral integrity, mental soundness, and emotional stability. This fact makes it of primary importance in any scheme of education. Therefore, it is our aim as an educational organization to concern ourselves by all proper means with the fullest realization of health by all connected with the educational process—children, teachers, parents, and the community. We, therefore, declare our adherence to the following ideals:

a. We must maintain a health service which shall at the earliest possible moment in the life of the school child discover and correct, as far as may be, those defects which would interfere with health; which shall detect and ward off both personal and epidemic diseases that threaten health; and which shall engage the coöperation of the home and all other agencies to give to every school child continuous, normal, robust health.

b. We must provide opportunities for children to learn and practice those skills which tend to promote a sound, vigorous, and harmoniously developed body as the home of a happy, wholesome, integrated personality, giving emphasis to the strengthening of big muscles and vital organs, the development of physical and moral courage, the enlargement of the natural love for recreational games in the physical education field.

c. We must provide as far as may be possible other wholesome recreational interests and hobbies which, while valuable at the time, shall look forward to later days when play and recreation mean so much but are so unattainable unless brought forward from youth.

d. We must provide instruction in health facts and health practices so fitted to the needs and interests of the child at varying stages of his development and so buttressed with worthwhile activities that such facts and practices shall be continuously fused into the being of each child by an unflinching enthusiasm for healthful living.

e. We must see to it that the surroundings of all children in school, whether in equipment, school procedures, or general morale, shall in no wise hinder,

¹ This principle is discussed in *Character Education*, pp. 57-59. Department of Superintendence, Tenth Yearbook. Washington: National Education Association, 1932.

² Otto W. Haisley, "Adjusting Health Education to the Newer Trends in Educational Philosophy." *Journal of Health and Physical Education*, III (October, 1932), 16.

but shall rather aid the fullest development of every child in the matter of health.

f. We must aim to have every teacher fully equipped with health information and a living embodiment of good health and of all the characteristics of body, mind, and spirit which properly belong with it.

g. We must endeavor to lead youth into an attitude toward life—its problems, opportunities, and responsibilities—which will buttress it with courage and suffuse it with a kindly glow of geniality and service.

Criteria for the selection of program content. A review of the literature in connection with school programs of physical and health education reveals that there are many procedures and activities that might be included in a program. In order to decide satisfactorily what should be the program content, it is necessary that some guiding principles be accepted which can be used as standards in the selection of activities and techniques. The statements¹ listed below are suggested as valid criteria for the selection of the content of a school program of physical and health education. Comment on each statement will be found in the paragraphs following the list. In order for an activity to be included in the program, it is not necessary that it conform to all of these criteria, but the activities which meet the requirements of the greater number of the standards should be selected for the content of the program.

1. The activities included in the program must occur frequently in the daily lives of most individuals.

2. The content of the program must be such that it is not provided satisfactorily by other agencies outside the school.

3. The activities included in the program must be such as to occur frequently in the daily lives of most individuals as they should live during adulthood.

4. The content of the program must be within the range of experience, interest, ability, and capacity of the pupils so that they can achieve a reasonable degree of success.

5. The activities included in the program should be the ones of the greatest relative value.

6. The number of activities included in the program must be relatively small so that a few valuable activities may be taught intensively, rather than treating many activities superficially.

7. The activities included in the program must be such that they

¹ The statements are for the most part adapted from two sources. (1) L. Thomas Hopkins, *Curriculum Principles and Practices*, p. 184; Chicago: Benj. H. Sanborn and Company, 1930; and (2) California Curriculum Commission, *Teachers' Guide to Child Development*, pp. 9-15; U. S. Office of Education, Bulletin, 1930, No. 26; Washington: Government Printing Office.

can be graded and arranged in progression to fit the needs of the pupils.

8. The activities included in the program must be such that a maximum correlation with other subjects is possible.

9. The activities should provide desirable and wholesome contacts with other people.

10. The activities should lead to other worthwhile activities.

The activities included in the program must occur frequently in the daily lives of most individuals. There are some activities such as the giant swing, the skip, the "grand liver squeezer," and the "rib raiser" that do not occur very often in the lives of very many people. There are other activities such as walking, climbing stairs, sitting down, getting up from a sitting position, raising windows, lifting objects (e.g., chairs), and getting in and out of automobiles that occur several times each day in the life of nearly every one. The physical education program should provide instruction in the motor activities that have a high frequency of occurrence in the daily lives of many people and should give practically no time to instruction in activities that are foreign to the needs of the great majority of individuals.

The content of the program must be such that is not provided satisfactorily by other agencies outside the school. Organized society has established schools and supports them to fill an educational need that cannot be satisfactorily filled by the home or other social agency. The school, therefore, should not teach any part of physical education that is being taught effectively to all children by some other agency. For example, if a school is located in a community that has a highly organized and successful community recreation program which is providing ample opportunities for all children to participate in after-school play, it would hardly be justifiable for the school to duplicate this after-school program. Another illustration might be the case of a school located in an exclusive residential section in which nearly all the girls were taking private lessons in natural dancing. In such a situation it would probably be unnecessary for the school physical education program to emphasize instruction in natural dancing.

The activities included in the program must be such as to occur frequently in the daily lives of most individuals as they should live during adulthood. In addition to providing instruction in activities that are immediately useful in the daily lives of individuals, a well rounded instructional program prepares young people for the activities in which they will participate after they reach maturity. It is not possible, of course, to be certain of the activities that most people will take part in after they finish school but by considering the experiences of individuals who have gone before and observing those

now living it is possible to make a reasonable estimate of the kind of instruction that will prove to be of value in later years. Activities that can be enjoyed without long and intensive periods of training, and that one or two people can play, are the kind of activities that are likely to be of value to most individuals during adulthood. These activities include such sports as golf, tennis, swimming, horseback riding, fishing, hunting, boating, canoeing, archery, quoits, handball, and squash. Such sports as these should be participated in by all healthy adults for their hygienic, social, and recreational values. Football, basketball, long distance running, exercises on apparatus, and other highly organized and strenuous activities will not be of much direct value to most adults.

The content of the program must be within the range of experience, interest, ability, and capacity of the pupils so that they can achieve a reasonable degree of success. It is essential for pupils to be successful in a majority of the activities of the program if they are to get the most satisfaction out of the participation and are to profit by the accompanying educational experiences. In order for a child to be successful in an activity he must have had some previous experience that will cause the activity to have meaning to him. Suppose, for example, a group of third grade boys who had never even seen a game of basketball were put through a period of drill on basketball strategy, they would probably be bored and disgusted. However, a group of older boys who knew how the game of basketball is played would probably get a reasonable degree of satisfaction out of routinized basketball drills. The interest of a person in an activity is another important thing which influences successful participation. The individual who has an attitude, point-of-view, or mind-set favorable to an activity will learn it quickly and pleasantly, whereas the person who has been influenced unfavorably will probably be annoyed by participation regardless of how enjoyable the activity is to other people.

The motor ability and capacity of persons vary from one individual to another. Sex, age, and grade in school are some of the characteristics that are associated with individual differences in motor ability and capacity. If the activities are expected to make any appeal to the pupils it is evident that the content of the program must be within the range of the ability and capacity of the members of the class. If first grade children were urged to hit with a baseball a small target located fifty yards from them it would be only a short time before they would be annoyed by having to attempt the almost impossible feat. If a group of college freshmen, men who had no musical ability and had never had any instruction in dancing, were directed to inter-

pret by means of bodily expression an entirely new musical selection they probably would find it most difficult to achieve enough skill to enjoy participation in that kind of activity. It is clear, therefore, that the content of the program must be adjusted to the characteristics and individual differences of the members of the class.

The activities included in the program should be the ones of the greatest relative value. Some physical education programs include activities which have relatively no value and are put in the program for the purpose of providing variety. Such activities include relay races, in which each runner must be in some unnatural position like holding the right ankle with the left hand; jumping with the legs and ankles pressed closely together; and other meaningless and silly events. No activity should be included in the program merely for the sake of variety. If the content is of interest and value to the pupils there will be an intrinsic appeal and it will not be necessary to resort to artificial means of motivation. The activities included in the program should be the ones that will help in the achievement of the desired goals, and every event should make a definite contribution to this end. It is evident that the goals which are set up will determine largely the content of the program. This is as it should be, and each item should be selected or rejected on the basis of its relative value in the attainment of the goals.

The number of activities included in the program must be relatively small so that a few valuable activities may be taught intensively, rather than treating many activities superficially. After the aims, objectives, and goals of a program have been determined and the items of content have been selected on the basis of greatest relative value, a few of the most valuable activities should be selected to be taught. These valuable activities should be taught thoroughly so that the pupils will have a mastery of them. It is believed to be much more effective to teach well a few activities, so that the children will have considerable skill and knowledge of them, than to give a small amount of time to each of a larger number of items with the result that no one would be really proficient in any activity. This principle is applicable to the teaching of all subjects but it is particularly cogent in relation to physical education. If a person can swim a few yards, discharge a gun nervously, cast an artificial bait awkwardly, sit on a horse with considerable effort, play tennis and handball and squash and badminton in the novice or "dub" class, and hit a golf ball one time out of five attempts, he is not very well prepared to spend any part of his leisure time in physical recreation. But if an individual can participate skillfully and successfully in only two or three of these activities, he can get much pleasure and satisfaction by taking part

in them. It is important, therefore, for every one to develop considerable proficiency in a few activities rather than to obtain a slight degree of skill and knowledge in a large number.

The activities included in the program must be such that they can be graded and arranged in progression to fit the needs of the pupils. If Looby Loo were taught in the first grade, repeated in the second grade, and taught again in the third grade, one would be likely to conclude that the progressive experiences of the pupils had not been considered in the selection of the program content. If basketball were taught in every grade from the fifth through the senior high school one would probably conclude that either the interests and needs of children do not change as the result of growth and new experiences over a period of years, or no effort had been made to select, classify, and grade the instructional materials. There are so many important activities which should be taught in physical education that it is essential that the same events not be taught in different grades unless there is a new emphasis or a new goal.

The things included in the content should be graded and arranged to fit the needs of pupils of different ages, grades, sizes, and abilities. In order to make such a selection and arrangement of material it is necessary to know the physical, mental, and social characteristics of children at different age and grade levels.

The activities included in the program must be such that a maximum correlation with other subjects is possible. Education takes place best when children have the opportunity to live through inclusive and complete experiences. In situations where a large number of entirely different subjects and activities are presented to the pupils to be learned as separate items, the educational results are frequently not of a high quality. For these reasons the activities taught in the physical education classes should be of a kind that will fit in or correlate with other subjects to provide unified experiences for the pupils. For example, if the children in a fourth grade were studying about boats as a project, the physical education periods during this time could be spent in activities usually associated with sailors, such as rope climbing and certain rhythms; in games which are played on boats, such as deck tennis and shuffle boards; and in games and dances that are popular in the different foreign countries which are visited by boats. In schools where arithmetic, reading, spelling, and geography are taught as entirely separate subjects, the physical education program should consist of games, dances, and athletic sports which offer some opportunity for correlation with these traditional school subjects. The use of calisthenics, formal gymnastics, and formal apparatus work are incompatible with situations where either kind

of instruction is carried out because it is not apparent that a maximum correlation could be achieved with formal physical activities and other school subjects or projects.

The activities should provide desirable and wholesome contacts with other people. There is no better way to get to know a person than to play with him. Playing such games as golf, handball, squash, badminton, and tennis provides opportunities for social contacts of a most wholesome sort. Hiking through the woods with a group of congenial companions is a most pleasant experience and provides social relationships that are possible only in such situations. The games of small children and the more highly organized competitive sports of adolescents provide social contacts with other people in situations which are charged with interest. It is a fact that there are no activities and no situations that provide such desirable and wholesome opportunities for worthwhile social contacts as do the natural play and recreation of children, youth, and adults.

The activities should lead to other worthwhile activities. There are some activities that are ends within themselves and do not lead on to participation in other interesting and educational activities. For instance, bending forward and touching the floor with the tips of the fingers without bending the knees is an activity that offers only very limited opportunities for stimulation to further activity. There are other activities that by their very nature are conducive to further study and exploration. An afternoon hike into the woods by a group of fifth grade children might lead to a study of the history of transportation; of various methods and means of transportation at the present time; of flowers, trees, and plants; of various physical activities such as walking, carrying burdens, vaulting over ditches, climbing trees, poles, and ropes; of woodcraft activities such as building fires, cooking, and trailing; and of the history and traditions of the early pioneers and woodsmen.

The content of the physical education program should include the maximum number of activities that will lead to other worthwhile activities.

Some problems in physical education. The selection of the content of a physical education program is one of the most important problems that must be solved in every school. There are, however, other problems that must be met by teachers who have the responsibility of teaching physical education in schools.¹ Among these are (1) the interpretation of the values, objectives, ideals, and program

¹ William H. Bristow and Charles D. Vibberts, "The Problem of Administering Health and Physical Education in Secondary Schools," *Journal of Health and Physical Education*, II (November, 1931), 3 ff.

to educators and to the public; (2) the organization and presentation of satisfying instructional materials; (3) finding a place in the crowded school schedule for physical education; (4) planning a program and adopting activities to particular types of situations; (5) making the most efficient use of facilities, including inadequate and unsuitable facilities; (6) securing proper pre-service and in-service professional preparation of teachers to teach physical education; (7) the organization and direction of interscholastic athletic activities; (8) the adaptation of materials, methods, and organization to meet the individual differences of pupils; and (9) the control of the school environment and instructional procedure to the end that participation in physical education will be healthful to all pupils.

Solution of the problems. In order to understand and solve the problems that arise in the teaching of physical education it is helpful for a teacher to know something of the history of the movements and philosophies which have influenced its development. Each teacher should also know the aims and objectives of modern physical education, its significance in the school program, and the activities that should be included in the divisions of the program usually designated as health service, health supervision, health instruction, and physical education. It is likewise essential for each teacher to be familiar with the methods and techniques for determining the individual differences of children and for adopting a program to fit the needs of each individual. Knowledge and skill in the techniques of teaching and of organizing and administering the program should be provided as a necessary part of the preparation of every teacher. It is also important for teachers to know the significant facts in regard to the hygiene of the school environment and of the activities, to have some familiarity with the problems of interscholastic athletics, and to be familiar with the available data concerning the opportunities in physical education as a profession.

The succeeding chapters of this book will attempt to present material which will be of practical value to teachers in diagnosing and solving the problems that arise in connection with teaching physical education. The subject matter is arranged in units which correspond to the problems faced most often by teachers. It is believed that content organized in this way may be of the maximum functional value.

Summary. The changes which take place in society influence the development of physical education. During the past thirty years unusually rapid changes have taken place in American society. It is necessary that teachers of physical education recognize these changes and adjust their programs to fit modern conditions and needs. The social trends which are observable in American society indicate that

there is need for physical education to be taught in all the schools of the country. The changes that have taken place in the American home, the church, industry, business, and the school emphasize this need.

There is much objective evidence to show that physical education can contribute a great deal of a social, educational, recreational, and hygienic nature to many persons. Physical education and health education are frequently combined for purposes of administration and instruction. The combined program includes health service, health supervision, health instruction, and physical education. In order to choose intelligently the activities which make up the content of the program it is necessary to have some definitely stated ideals and criteria.

The following statements are proposed as valid criteria for the selection of the content of the school program of physical and health education:

1. The activities included in the program must occur frequently in the daily lives of most individuals.

2. The content of the program must be such that it is not provided satisfactorily by other agencies outside the school.

3. The activities included in the program must be such as to occur frequently in the daily lives of most individuals as they should live during adulthood.

4. The content of the program must be within the range of experience, interest, ability, and capacity of the pupils so that they can achieve a reasonable degree of success.

5. The activities included in the program should be the ones of the greatest relative value.

6. The number of activities included in the program must be relatively small so that a few valuable activities may be taught intensively rather than treating superficially many activities.

7. The activities included in the program must be such that they can be graded and arranged in progression to fit the needs of the pupils.

8. The activities included in the program must be such that a maximum correlation with other subjects is possible.

9. The activities should provide desirable and wholesome contacts with other people.

10. The activities should lead to other worthwhile activities.

In addition to the problem of choosing the content of the program intelligently, there are a number of other problems that must be met by every teacher of physical education. The discussion of these prob-

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lems and the presentation of material that will be helpful in their solution is the function of the succeeding chapters of this book.

QUESTIONS

1. What are some instances of uneven and unsynchronized change in American social institutions?
2. How has the rapid development of industry influenced the home life of Americans?
3. What are some of the ways in which physical education can help persons to adjust successfully to their social group and to enjoy more of the pleasures of life?
4. What social trends, observable in American society, indicate that there is a need for teaching physical education in all schools?
5. Of what significance for physical education are the trends of population distribution in the United States?
6. What are some of the values of physical education as shown by available objective evidence?
7. Under what main headings are the activities included which make up a unified program of physical and health education?
8. What purposes do ideals and criteria serve in the solution of problems?
9. What are some criteria that might be used in the selection of content for a program of physical and health education?
10. What are some of the kinds of information that every teacher should have in order successfully to solve the problems which are likely to arise in teaching a school program of physical education?

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CHAPTER II

PHYSICAL EDUCATION BEFORE THE EIGHTEENTH CENTURY

The contribution of history. It is important for a teacher of physical education to have a knowledge and understanding of the influences that have helped to shape its development. Such knowledge enables one to see in proper perspective the present-day program of physical education and to evaluate the various theories that have been advanced; it gives one some familiarity with physical education practices in the past, and enables one to use some of the experiences of former generations in solving the problems of the present.

This chapter and Chapter III are concerned with a discussion and interpretation of some of the great movements and historic forces that have influenced thought and practice in physical education. No attempt is made to be exhaustive in the presentation of facts or in the discussion of the contributions of individual men. Only enough material is presented to make clear the influences that have operated in the development of physical education. No mention is made of many men, schools, and theories that have flourished and been important in their time but have not affected to any considerable degree the progress and development of physical education.

Programs of physical education have been determined to a considerable extent by the social, political, economic, and religious influences of their times. For example, in Sparta when it was necessary for every man to be a good soldier in order for the city-state to exist, the entire education of the children and youth was directed toward developing strong, courageous, disciplined soldiers.

In Athens, where it was socially desirable to have beauty and grace of form, to be able to dance well, to play the lyre, to sing and to appreciate the writings of Homer, the program of education made definite provision for the development of such traits and abilities. During the Middle Ages, asceticism as an ideal of Christianity discountenanced any development or care of a physical nature and this attitude very definitely influenced the program of education as carried on in the monasteries and in the cathedral schools. In the first part of the nineteenth century when Germany was made up of a group of states loosely tied together politically and unable to prevent the

encroachments of other nations, the program of education and of physical education began to emphasize the importance of nationalism and the development of strong soldiers for the German armies. As a result of this type of education Germany was almost able to defeat the rest of the world in the War, 1914-1918.

Physical education in primitive times. Man has had some kind of physical education from remotest antiquity, but in the early days of the race no organized instruction was given. Much of the learning took place as the result of simple imitation, and the influences that were brought to bear upon the individual were such as to make him conform to his environment and adjust himself to his fellows. Most of the activities of primitive man were directed toward securing the means of existence, and were predominantly of a physical nature: hunting, fishing, fighting, preparing shelters, and so on. The physical education that received attention was primarily utilitarian; it was directed toward fitting each individual to secure the practical necessities of life.

Over a period of many centuries man lived, grew, changed, and developed under such primitive conditions. It is only recently that he has radically changed his mode of living, thus giving rise to the problem of adjusting an organism that was fitted for an existence in the forest and on the plains to an entirely different set of artificial situations created by present-day civilization.

Educational theory in ancient China. The educational philosophy China inherited from ancient times well illustrates a point of view that apparently has been influential since the dawn of civilization and one that is still held by some persons and groups. Preparation for life in a static society, as opposed to preparation for successful living in a dynamic and ever-changing society, was the main purpose of education in ancient China. The individual and the opportunity for self-expression were not important factors in determining the program of education. Maintaining the stability of the established social order was the educational outcome sought.

Such a philosophy, of course, was not conducive to the development of any program of physical education. The view is in direct opposition to modern theories of education. Educationists now recognize the fact that education should help each individual to develop to the highest possible degree the talents with which he has been endowed; and that he must be provided, in a variety of situations, with experiences which will enable him to adjust to a rapidly changing environment. Present-day education emphasizes the right of the individual to live happily and successfully, and seeks to develop his capacity and ability for such living.

Western influences. The educational program of the western world as we know it to-day is the result largely of four influences, the most important of which was the educational philosophy and practices of ancient Greece. It is true that the Phoenicians gave us our alphabet and that the Chinese, the Persians, the Egyptians, and others have made some contributions to modern civilizations; but none of these are real sources. The most fundamental influence in shaping present-day education was that of the Greeks, particularly the Athenians. The Romans and the Christians have likewise played an important part in laying the foundations on which succeeding generations have built. The fourth influence of far-reaching significance in the progress and development of civilization and education was the invasion of the Roman Empire in the fourth and fifth centuries by the Germanic tribes.

Education in ancient Greece. The most consequential influence of the Greeks was the development of the ideal that each individual is a distinct personality and that it is the responsibility of government and of education to provide for the development of individual personality. In the more advanced of the Greek city-states, such as Athens, it was definitely recognized that the state existed to provide and guarantee freedom for the individual, that government must be run in the interest of the governed, and that each citizen must recognize his responsibility for the public good.

The program of education in Greece attempted to prepare each person to be a good citizen, to train him to recognize his own moral responsibilities, to develop his intellectual powers so that he would always maintain an "open mind" and be tolerant of change, and to develop his appreciation of the beautiful and his ability to interpret and express ideas and emotions in an objective way by movements of the body, through music, or the like. In order to achieve these ends the Greeks developed a curriculum which consisted of gymnastics; music, which included poetry, drama, history, oratory, science, and music in the narrow sense; literary elements, which included the Iliad and the Odyssey and, after about 600 B.C., reading and writing, and dancing, which was intended for training in thought, emotions, morals, and esthetics.

Greek education was primarily a doing process rather than an instructional or teaching procedure. Here was truly an application of the principle of "learning by doing." It was first sought to establish a habit through exercise and then to provide the necessary instruction in order that the student might understand the fundamentals on which the habit was based. The Greeks did what modern educational philosophers have been emphasizing, in that they used the ordinary

everyday activities of life as educational opportunities and saw to it that the work and other activities of each individual provided for wholesome self-expression and the development of individuality. Monroe¹ points out this fact and states that: "This characteristic was nowhere more strikingly expressed than in the games and gymnastic exercises. They were but expressions of the personality of the citizen. Through them the individual declared his freedom from limitations imposed upon man by nature and indicated his superiority over his fellows."

The successful leadership of Athens in the Persian wars from 500 to 479 B.C. enabled the Greeks at Marathon, Salamis, and Plataea decisively to defeat the Persians and thereby to remove the danger and threat that had always existed from the older societies in the East. These despotisms, with their caste system of social organization, were intolerant of change and intellectual development. If Persia had defeated the Greeks the development of western civilization would no doubt have been greatly retarded. The military successes of the Greeks made secure this new type of civilization that recognized individual freedom and opportunity, and started the greatest period of development and creative production in literature, philosophy, and art that the world has ever known.

The influence of Rome. The Romans were a practical, unimaginative, and forceful people who were more interested in achieving things, in carrying out objective concrete undertakings, than they were in subjective ideals or an appreciation of the artistic and esthetic. The standard by which they judged any idea was its practicality, its use in achieving some utilitarian results.

Early in her history Rome displayed the ability of organization and the genius for government that characterized her throughout her career. Beginning as one of the tribes of the Aryan race that were living in the different parts of Italy, when history was first recorded, she had by 201 B.C. gained control of the whole Italian peninsula. During her entire history Rome was always able to win from the peoples she conquered a loyalty and an attachment for Rome that were as strong as those of native Latins. She permitted her subject people to become citizens, to hold public offices, and to decide for themselves whether to accept Roman ideals and ways of living. As the result of such understanding and intelligent policies, Rome was able, following her military successes, to establish a world empire during the second century before Christ, and during the century that followed to become ruler of the entire Mediterranean world.

¹ Paul Monroe, *A Textbook in the History of Education*, p. 101. New York: The Macmillan Company, 1920. Quoted by permission of the publishers.

The nature of Roman education. All Roman education was carried on in the home and in the activities of everyday life up to about 300 B.C. During this early period the boys were taught by their fathers to be good citizens and the girls were taught by their mothers to be good housekeepers, wives, and mothers. There was no definitely organized and planned physical education such as the Greeks had. The boys gained what physical education they received through games and the exercises concerned in preparation for military service. The Romans could see no utilitarian value to the gymnastics of the Greeks and therefore would have nothing to do with such practices. They were not interested in harmonious development but believed in exercise as a means of preparing soldiers for participation in war.

After about 300 B.C. there were a few private schools started in Rome but there were not very many of them and they did not last long. However, during the second century B.C. the national ideals of Rome changed rapidly; with the change in ideals came a change in education. During this period the armies of Rome were outstandingly successful, and their success resulted in the introduction of considerable wealth and large numbers of slaves from the captured provinces. This easy prosperity had a disintegrating and otherwise unwholesome effect on the people. Morals degenerated, religious faith waned, corruption in government became common, the economic system was changed so that the small farmer was eliminated and there were many large estates and extremely wealthy men, and the social system was changed because the peasants, no longer able to earn a living on the small farms, either became professional soldiers or congregated in the cities to form part of the mob that had to be fed and entertained. It was evident that the education provided in the home and in a few private schools could not fill the needs occasioned by such radically changed conditions. Since the political, social, religious, and economic conditions and ideals had changed, it was necessary that the type of education be changed to meet these new conditions. In the attempt the Romans adopted the educational program that had been developed by the Athenians.

Subsequently the intellectual life of Rome conformed rather closely to that of Greece. It must not be thought that this revolutionary change took place suddenly and completely. Plutarch, Cato the Elder, and others wrote and talked against the Greek influence. The Roman Senate in 161 B.C. attempted to prohibit philosophers and rhetoricians from living in Rome, and in 92 B.C. the censors disapproved of schools that had been affected by the Hellenic influence. After 27 B.C. when Rome became an empire, the emperors encouraged and protected the new learning. This sponsorship provided for the

spread of Greek literature and philosophy to all parts of the civilized world, which was a most important event in the history of western civilization.

We see, therefore, that although the Romans did not directly make any great contributions to philosophy, art, literature, and education, they did, through their ability to organize, govern, and achieve practical undertakings, make it possible for the very valuable contributions of the Greeks to be disseminated and transmitted. This change was most important in preparing the way for Christianity, which has had a vital and fundamental influence on the development of physical education.

The influence of Christianity. Christianity came into existence at a time when there was a great need for some statement of fundamental principles by which the masses of mankind could guide their conduct and shape their ideals. The teachings of Plato and Aristotle and of Stoic philosophers, appealing chiefly to the intellect, could be appreciated by a relatively small number of people. Christianity, with its great inspirational teachings, made its appeal on the basis of the emotions and therefore presented an understandable ideal to all classes.

The early leaders in the church held two different points of view in regard to whether Christianity should adopt any of the teachings of philosophy. One group believed that the Greek philosophers were the forerunners of Christianity and that much benefit could be derived from accepting some of their teachings. The other group believed that the literature of the philosopher could be identified only with paganism and that an attempt to combine it with the teachings of Christianity would result only in heresies. The point of view of the latter group gained the ascendancy and the churchmen would have nothing to do with the learning that had been organized and handed down by the Greeks and Romans. As late as 398 B.C. one of the synods of Carthage forbade all bishops to read any literature that contained any of this old learning. This hostility and antagonism to learning on the part of the Christian church had a profound and far-reaching influence on the progress of civilization and education, and played an important part in bringing on and extending the period that is ordinarily spoken of as the Dark Ages.

During the period of the Middle Ages, which is usually considered to include the period from the sixth to the sixteenth century, monasticism, chivalry, and scholasticism had considerable influence on education. These influences are active in education and physical education at present, and many policies and lines of action in educational matters are affected by them.

The fundamental idea of monasticism was asceticism, which em-

phasized the neglect and abuse of the body and the subordination of all natural human interests and desires so that the intellect and the spirit might be free to develop on a higher level. This kind of outlook on life advocates running away from the perplexing and annoying problems of life rather than attacking them in an intelligent manner with a determination to solve them.

Chivalry was a form of education and discipline which, for those in secular society, took the place of monasticism for those leading a religious life. The boys and youth during the period that was spent as pages and squires were expected to learn the rudiments of love, of war, and of religion. The rudiments of love consisted of desirable traits such as courtesy, kindness, gentleness, polite manners, and generosity. The rudiments of war consisted of riding, handling a shield, throwing a spear, and other activities of a soldier. The rudiments of religion consisted of an oath to fight for the church, to protect the women and poor, to attack the wicked, and to give one's blood in behalf of one's comrades. This education for chivalry influenced considerably the programs of education that were formulated by the educational leaders during the Revival of Learning in the Fourteenth and Fifteenth Centuries. The emphasis on courtly manners and knightly sports fitted in well with the revived educational ideals of Greece and Rome.

The development of scholasticism. By the twelfth century a new point of view was developing in regard to Christianity and theological tenets. Many searching questions were being raised and heretical views expressed. In order to meet these changed intellectual interests it became necessary to reformulate the statements concerning religious beliefs. The kind of education and ways of thinking that developed to meet these changed conditions is known as scholasticism. Two of the influences of scholasticism that have affected the development of physical education were, first, the dependence on quoting external authority for the solution of all problems, thereby developing an attitude antagonistic to inquiry and doubt, and second, the emphasis on and acceptance of the ideal that all instructional materials and methods must be organized and presented in a logical order as judged by the adult mind. It is only in the last quarter of a century that any considerable progress has been made in eliminating these two false doctrines from the educational philosophy and practice in this country. At present, however, it is generally agreed that one of the functions of education is to help boys and girls develop habits, attitudes, and abilities which will enable them to face squarely any life problem, take into consideration all the available factors involved, and to make the best possible intelligent solution. It is also well

established in modern educational theory that instructional materials should be organized and presented primarily in a psychological rather than a logical order. In other words things should be taught, preferably, when the child feels or recognizes a need for them to help him do something in which he is interested.

Influence of the barbarian invasion of the Roman Empire. Beginning about the middle of the second century the barbarian tribes from the north and east of the Empire began to make successful attacks and inroads on the territory south of the Rhine and the Danube. These encroachments continued at intervals until A.D. 378 when the Visigoths decisively defeated the Roman army at Adrianople. A few years later this same tribe under the leadership of Alaric invaded Greece and in 410 sacked Rome. After this the territory of the Roman Empire was invaded and plundered by a number of barbarian tribes and in 476 a barbarian tribesman was made ruler of the Western Empire. Each of these tribes finally settled, and practiced a type of crude agriculture.

These invasions by savage tribes practically destroyed the civilization that had developed up to that time and plunged the Western world into an intellectual darkness, the recovery from which took nearly a thousand years. During this long period of time the philosophy underlying physical education and its techniques were given practically no consideration. Some of the ideals of this period have had much influence on the development of physical education, but it was not recognized as a field of education during the Middle Ages. This catastrophe did serve the purpose, however, of infusing the new and youthful blood of the Germans with that of the weakened Roman race. After the world began to recover from this barbarian deluge most of the learning of the Greeks and Romans was recovered, and since about the fifteenth century students of education have had the benefit of many of the intellectual contributions of the Ancients.

Physical education during the Renaissance. The dominant ideal for education in Europe during the Middle Ages was preparation for the life after death. The preparation for service to society or for joyful and satisfying living was not recognized as a worthy objective of education. The right of the individual, which had found such widespread recognition in ancient Greece, was ignored and human personality was subordinated. The spirit of the Renaissance was in direct opposition to this medieval point of view. The new movement emphasized individualism and the right of each person to direct his own life in such a way that the most satisfaction would accrue to him. During this transitional period of approximately three centuries the political, social, economic, and religious life of Europe

underwent radical changes which marked the birth of modern times. Centralized governments evolved out of feudalism and the nations, with ideals of nationalism, came into existence, trade and commerce with organized banking and credit increased tremendously, many important cities were built up, much exploration resulted in a greatly increased knowledge of geography, a willingness to doubt and question the existing order of things indicated a tendency toward the development of a modern scientific attitude on the part of the more intelligent elements in society; and the invention of the printing press marked the doom of widespread superstition and made possible the dissemination of new ideas.

The revival of learning in Italy. The Revival of Learning began in Italy about the beginning of the fourteenth century, and after a century spent in recovering and reconstructing the learning of ancient Greece and Rome, the Italians were in possession of most of the intellectual inheritance of the past. Following this period a number of "court" schools were established in Italian cities to which the children of the nobility and the upper classes were sent. Among the better of these schools, and the one that has influenced the development of physical education in the schools more than any other, was the one conducted by Vittorino da Feltre at Mantua from 1423 to 1446. Da Feltre conducted this school on an entirely different basis from that of the traditional type of monastic and cathedral schools. One outstanding difference that he emphasized in his writings and in practice, was the importance of physical education and the care of the health of his pupils. This was in direct contrast to the accepted practices in schools conducted by the Church. He was so successful in this school and accomplished so much in such a short period of time, that he was the cause of the development of a series of secondary schools that taught the subject matter formerly taught by the universities.

The revival of learning in other countries. In Italy the emphasis and major interest during the Revival of Learning was of an intellectual nature. The aim of education among the Italians at this time was to prepare for life in the world as it then existed so that each individual might live a more useful and a happier life. The program that was developed to achieve these ends included much of the new humanistic learning and many of the best features of education from the age of chivalry; such as physical education, reverence, good manners and courtesy. When the new interest in learning spread to the countries north of Italy, it became very closely identified with religious reforms. Knowledge of the writers of ancient Greece and Rome and ability to read Latin were thought to be necessary for the ministers

and desirable for every one, in order that each individual might work out his own salvation through reading and understanding the Scriptures.

During the fourteenth and fifteenth centuries there was a great deal of dissatisfaction with the established church and there was much agitation for a return to the simple Christianity as taught by Christ. Unrest was general throughout the Christian countries, with the exception of Italy and southern France. The revolts of John Wycliffe in England and John Huss in Bohemia gave evidence of how widespread and emphatic was the dissatisfaction with the established church. All of this agitation was an indication of the increasing conflict between the developing modern scientific attitude and the medieval spirit which relied entirely on external authority for guidance in all matters.

A revolt against the Roman church that was most successful and far-reaching in its influence was started in Germany and had as its central figure Martin Luther, who was a professor of theology at the University of Wittenberg. Luther precipitated the revolt in October, 1517, by making a list of 95 reasons why he believed the practices of the Catholic church were wrong and setting forth what he believed as the true and fundamental Christian doctrine in each case. He tacked this list to the door of the church in Wittenberg and challenged any one to debate the statements with him. This movement of revolt spread rapidly in Germany and the other countries of western Europe under the leadership of enthusiastic reformers such as Zwingli in Switzerland, Knox in Scotland, and Calvin who organized a religious and educational program for the city of Geneva in 1537.

The influence of Calvin. From the standpoint of education in America, Calvin's influence has been more important than that of any of the other leaders of the Protestant Reformation. His fundamental religious beliefs were not greatly different from those of Luther, Zwingli, Knox, and other leaders of the Reformation. It is true that he emphasized the political, religious, and social importance of education, but his primary concern was that each individual receive enough education to enable him to become familiar with the teachings of Christianity. He believed that it was desirable for people to be familiar with the Humanistic literature and agreed that "the liberal arts and good training are aids to a full knowledge of the word." The main difference between Calvin and the other reformers was that he possessed unusual ability to promote and to organize and was thus able to spread rapidly and effectively his teachings which were to result in the reformation and reorganization of the political, social, economic, and religious life of a large part of the world's people.

The ideas of both Luther and Calvin concerning education included the provision of elementary schools taught in the vernacular, and of secondary schools to prepare leaders for service in church and state. Both of these leaders believed that every one should have at least as much education as that provided by the vernacular elementary schools, and held, as stated by Calvin, that education was "a public necessity to secure good political administration, sustain the Church unharmed, and maintain humanity among men."

The new schools and learning become established. The popular demand for religious and educational reforms that had grown up over a period of two centuries or more, coupled with the aggressiveness of the reform leaders, caused a new type of school, which taught the new humanistic learning, to become established throughout western Europe. After the new learning had secured definite recognition in the schools, the content and method became formalized and lost the emphasis which had been given by the earlier leaders.

It has already been pointed out that in Italy during the early days of the Renaissance the humanists used the new learning for the purpose of culture and the development of individuality; and in the northern countries it was used for moral and religious reforms and for the preparation of persons for service to the church and state. However, during the sixteenth and seventeenth centuries the humanistic learning came to be taught as an end in itself rather than as a means for the development of a satisfying culture and a preparation for broader service. The teachers emphasized the disciplinary value of the languages and literature, and schooling degenerated into formal drills in composition and imitation of the style of the ancient writers. This artificiality caused practical people to drift away from these schools and to establish a different kind of school which would serve to prepare for life in the world in which they were living.

This disciplinary conception of education dominated the thinking of a large proportion of the educators of America and many of the western European countries until the middle of the nineteenth century. In fact, even at the present time there are some indications that this notion of education is still held by many people.

The influence of realism. In line with the development of the spirit of inquiry and investigation and as a reaction against the formalism of the schools there arose during the sixteenth century a demand for a type of education that would get away from the emphasis on the form and style of ancient Roman writers and place more emphasis on the content and meaning of the material studied. This new spirit, known as Realism, stressed the need of considering the realities of life at the time instead of the excellencies of Roman

civilization. Cubberley, in his *History of Education*, states that this spirit, as applied to education, manifested itself in three different stages: (1) humanistic realism, (2) social realism, and (3) sense realism.

Humanistic realism. The English poet John Milton was one of the most prominent advocates of humanistic realism. He believed that practically all worthwhile knowledge was contained in the writings of the ancients, but he thought that these writings should be studied for their content and not primarily for the purpose of imitating their style. His writings on a program of education for a gentleman were extensively read and had a widespread influence among the gentry. The most important contribution of Milton and his contemporary humanistic realists, to the history of education, was the expression of the first reaction against the formalism that had taken hold of education. It is also interesting to note that Milton in his writings called his ideal school an "academy," which term was later carried to America and used as a name for a number of secondary schools that taught in the English language many of the new subjects advocated by Milton.

The humanistic realists believed that everything taught should have some utilitarian value. For example, Milton in his *Tractate on Education* provided for daily exercise and play, but he did not consider the main value of such play to be pleasure, recreation, and training in social and moral traits. He believed that such physical activities were desirable and necessary in order to develop alertness, motor skill, and courage which would prove useful on many occasions, especially in the life of a soldier.

Social realism. John Locke of England and Michel de Montaigne of France, as leading exponents of social realism, emphasized the importance of a type of education that would prepare one for the practical affairs of life in the modern world. The ideal that both of these men had before them was the preparation of a cultured and polished gentleman, and they believed that this could best be accomplished by a study of the world, of business, of politics, law, history, and the practical problems of life. The social realists stressed physical education but in their conception of values it was provided for disciplinary purposes rather than for its esthetic, social, and educational outcomes. It was Locke who made the often quoted statement that "A sound mind in a sound body is a short but full description of a happy state in this world." He believed that the very foundation of excellence lay in disciplining the body and the mind so that one's acts would not be the result of desires and emotions, but that every act would be determined by sound judgment and reason.

Social realism is still another step, along with humanistic realism, in the trend away from the formalized humanistic schools and their disciplinary ideals.

Sense realism. The educational philosophy underlying the spirit of sense realism was that children learned more things of value and learned easier through the actual experience of seeing and hearing than through reading. The stimulation of thought, which led to the recognition of a need for the formulation and organization of an educational method by which the educative process could be made more effective, was the important contribution of this movement. In doing this the leaders emphasized the application of scientific methods to educational problems in the same way that Francis Bacon had done for the sciences; the use of the vernacular in the schools in the place of Latin; the reorganization of the school curriculum so as to provide instruction in scientific and social studies; and the importance of studying and following nature in guiding and leading pupils in their educational adventures.

Richard Mulcaster, a London schoolmaster, who taught and wrote during the latter part of the sixteenth century, is often considered the first of the sense realists. Francis Bacon, although not a teacher, exerted considerable influence on education through his insistence that the school curriculum be revised and broadened to include study of the new scientific knowledge, and that better facilities and teaching be provided in order to promote and stimulate scientific study and investigation. A German, Wolfgang Ratke, published in 1617 his *Methodus Nova* which was a book on fundamental methods of teaching. This was a pioneer work in its field.

Probably the clearest exponent of sense realism in education and one of the outstanding personalities in the history of education was Johann Amos Comenius. He influenced educational theory and practice to a considerable extent during his lifetime but he has had an even wider influence since the middle of the nineteenth century when the manuscript of his remarkable book, *The Great Didactic*, was found at Sissa in Poland. The original manuscript was published at Prague in 1848, and the first English edition in 1896. The contributions of Comenius to modern educational methods of instruction and school organization have been greater, probably, than those of any one person. His influence, directly and indirectly, on the modern program of physical education has been important and widespread. This influence has been due mainly to our acceptance of his ideas that we should follow nature in our educational efforts and that the important function of a teacher is to lead and guide his pupils, not to make storehouses of their memories.

Summary. It is believed that a knowledge of the history of physical education will help a teacher reconstruct continuously his ideas and program to meet changing social conditions. Programs of physical education during each period of time in the history of the world have been shaped by the social, political, economic, and religious influences of the times. This was true in the case of primitive man who was engaged primarily in securing the means of existence. It was likewise true in ancient China whose people were interested primarily in maintaining the established social order; in ancient Greece where emphasis was placed on the development of individuality and the importance of human personality; and in Rome whose leaders applied the criteria of utility and practicability to every activity. It will be pointed out in Chapter III that during more recent periods of time in Germany, England, Sweden, Denmark, Russia, and the United States the programs of physical education have been determined by the status and needs of society in each of these countries.

The educational program of the western world, as we know it to-day, is the result, to a considerable extent, of four historical influences. They are (1) the educational philosophy and practices of the ancient Greeks, (2) the influence of the Romans through their ability to organize and govern, (3) the rise and rapid spread of Christianity, and (4) the invasion of the Roman Empire in the fourth and fifth centuries by the Germanic tribes.

Physical education is still influenced to some extent by the ideals of asceticism, chivalry, and scholasticism which have come down to us from the Middle Ages. The Revival of Learning, which got under way in the fourteenth century, caused the recovery of much of the learning and many of the ideals of the ancient Greeks. Among the better of the schools which came into existence under this influence was one conducted by Vittorino da Feltre at Mantua in Italy from 1423 to 1446. This school emphasized physical education, and provided the beginnings of secondary school education as we know it to-day.

The religious reformers in the different countries of Europe, who insisted that vernacular schools should be open to all children, had a great influence on the development of education. The leaders in the movement known as Realism, which arose during the sixteenth century, also exerted important influences on the principles, content, and methods in education. Johann Ames Comenius was probably the greatest of those who espoused the cause of Realism. His influence on physical education has been due mainly to our acceptance of his ideas that we should follow nature in our educational efforts and that

the important function of a teacher is to lead and guide his pupils rather than attempt to fill their memories with facts.

QUESTIONS

1. Do you believe it is probable that the civilized peoples of the world will be able within the next century to plan the social order intelligently, instead of leaving its development largely to chance? Why?
2. What place do you believe physical education should have in a planned society?
3. How can a knowledge of the history of physical education help one to contribute to an intelligently planned social order?
4. What are some illustrations from history to show that physical education programs are determined by social forces?
5. How have the beliefs and practices of the ancient Greeks influenced modern education?
6. What has been the influence of Christianity on the development of learning and of education?
7. What are some examples of the influence of the ideals of the Middle Ages on physical education at the present time?
8. What influence did the Revival of Learning have on physical education?
9. Who were some of the more prominent religious reformers in each of the countries of Europe? What was the attitude of each of them toward education?
10. Who were the outstanding exponents of Humanistic Realism, Social Realism, and Sense Realism? What were the educational beliefs of each of these leaders?

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CHAPTER III

THE DEVELOPMENT OF MODERN PHYSICAL EDUCATION

The significant changes of the eighteenth century. The eighteenth century was a time of rapid change throughout the western world. The new spirit and attitudes marked a change in the philosophical, religious, social, political, and economic interests and conditions of mankind. The hindrances and barriers to intellectual freedom and social progress were broken down during this century as the culmination of the spirit of protest, against restraint by either church or state, that had been in the process of evolution and development for five centuries. As a result of this development the influence of medieval theology was overthrown, the modern scientific spirit was given freedom to grow and expand, and a new political system based on the interests and welfare of the masses of the people became established. An important phase of this liberalism, and one that has affected directly the program of education and physical education in America, was the development of popular government based on written constitutions in America with the concomitant assurance of religious freedom. Contemporary happenings of much import to American institutions were the development of democratic government in England and the overthrow of medieval abuses in France as a result of the French Revolution.

The influence of Rousseau. One of the leaders of the reform movement in France whose writings influenced educational practice and theory throughout the civilized world was Jean Jacques Rousseau. He took a stand in regard to education that was in direct opposition to the prevalent educational practices of his age. He repudiated formal education, as it was then organized, and insisted that a good and desirable educational procedure would follow nature. Among the planks in his educational platform was his insistence on the education of the whole child as a complete personality, without attempting to split up his education into such parts as physical education, intellectual education, and moral education. He stated that he was unable to determine just when an activity changed from intellectual education to physical education or moral education. He pointed out the importance of using the natural interests and normal activities of

children in conducting their education, and expressed the conviction that teachers should keep in mind their obligation to teach children rather than subjects. He believed that education should help boys and girls to live satisfactorily here, at the present time, rather than attempt only to prepare for life after maturity or after death; that it should prepare one to solve the problems of life in an intelligent manner as the result of reason rather than to depend on external authority; and that it should provide preparation in adjusting to new and changing conditions and situations. Rousseau seemed to agree with John Locke in his belief that there was a relationship between a sound body and a sound mind, and stressed the fundamental importance of physical activity and health instruction.

Rousseau set forth his ideals concerning education in a book called *Émile*, in which he described the education of an imaginary boy named Émile and his wife Sophie. This book probably has been more widely read and has had more influence on education than any other book ever written. Although it did not set up any definite program of education it advanced ideals which, coming when they did, furnished the inspiration for a program of education to prepare citizens for life in democratic societies such as were in the process of development in America and in France.

Basedow and physical education. The most important influence that the teachings of Rousseau had in Germany was exerted through Johann Basedow's work. Basedow organized at Dessau, in 1774, a naturalistic school called the *Philanthropinum*, in which he put into practice many of the ideas of Rousseau and included some of his own. This was the first school in modern Europe which, admitting children from all classes of society, included daily instruction in physical education for all pupils. The program provided for instruction during one hour each morning and two hours each afternoon in games, gymnastics, athletic events, and recreational sports.

Basedow in his educational philosophy combined the best features of the teachings of Bacon, Comenius, and Rousseau. He advocated following nature and the use of natural methods in the education of children. He pointed out that it was most important for children to have unhindered opportunity to grow and develop during the early years of childhood and that much of the value of play was intellectual and moral as well as physical.

Basedow was not successful as head of the experimental school he established, and was displaced as director after a few years. The *Philanthropinum* closed in 1793, but its influence and the influence of the writings and teachings of Basedow made a permanent impression

on the schools of Germany and supplemented and complemented well the work of Pestalozzi.

The contributions of Guts Muths. One of the most important followers of Basedow was Christian Gotthilf Salzmann who organized in 1785 a school at Schnepfenthal in Saxe-Gotha. The location selected for this school was an ideal one for a naturalistic school, and Salzmann was able to reproduce the physical education program that he had observed at Dessau with the addition of pole-vaulting, running up and down hills, and target pitching.

After the first year of this school Johann Friedrich Guts Muths was placed in charge of the physical education program. He remained in this position for fifty years, and developed a program that compares favorably with good programs at the present time; it included swimming, athletics, gymnastics, games, stunts, outing activities, and recreational sports. He established a system of keeping accurate records which enabled him to determine what progress was made by each pupil.

Guts Muths wrote a great deal, and his writings enabled him to have a wide influence during his life as well as in succeeding generations. Two of his best known books were *Gymnastics for the Young*, and *Games*. He showed in his writings that he had a clear conception of the importance of basing physical education practice on sound scientific foundations, of the educational value of play, of the need for providing opportunities that would afford satisfying participation in games, and of the necessity for providing for girls and women a physical education program adapted to their abilities, interests, and needs.

Pestalozzi's recognition of the importance of physical education. Through his writings and his teaching in his schools at Burgdorf and Yverdon, Pestalozzi had probably a greater influence on elementary education during the nineteenth century than any other person. He was inspired and stimulated in his early efforts by the ideas of Rousseau, but after practical experimentation he concluded that the educational process required an organized procedure which would take into consideration the interests, capacities, and developmental status of the child. He comprehended the value of following nature in education, as had Rousseau, and also recognized the importance of self-activity and of "learning by doing." The development of psychological methods in education was brought to the attention of the public by him and he succeeded in bringing about much experimentation to take the place of opinion and custom in solving educational problems.

Herbart's emphasis on the unity of human intellect. The theory

of "faculty" psychology, current during the time of Herbart (1776-1841), caused much emphasis to be placed on the disciplinary values of education. It was believed that the mind was composed of a number of "faculties," some higher than others, and that the study of certain subjects such as mathematics and the classical languages would develop these "faculties" so that they could be used definitely to a better advantage in any situation that might arise in the life of the individual. This theory is prevalent even now and many people, in weighing the values of education, still agree with the statement that "It doesn't make any difference what you teach a boy, just so he doesn't like it."

This psychology was repudiated by Herbart and in its place he advanced the theory that the human intellect is a unity; that it is not broken up into a number of "faculties." He pointed out that one develops by having experiences and contacts, which are made possible through the nervous system and not by the development of certain inborn "faculties." This new principle of the absorption of new ideas by means of the ideas that one already has, is called *apperception*.

Froebel's exaltation of the values of play. Both Herbart and Froebel in their educational theory began with the teachings of Pestalozzi as a basis. Herbart pointed out the importance of experiences in the development of character and personality, while Froebel emphasized the necessity of studying children and basing educational efforts on their nature, interests, and needs.

Froebel gave considerable impetus in educational thought and practice to the use of activities selected for the purpose of education from the child's present normal life. He insisted that education must relate to life as the child is living it and that everything included in the curriculum should have some meaning to the pupils. The importance of creative activity on the part of children, rather than an absorption process of learning, was emphasized by him. He was one of the first to accept the theories of organic evolution and apply them to education, and in this connection he believed that one of the essential and fundamental factors in the evolutionary process was self-activity on the part of each individual.

Many educational reformers and writers since the time of Plato have emphasized the value of play in education. Most of them up to the time of Froebel, however, had valued play for its physical and hygienic effects. Froebel believed that the educational and character values were most important. How Froebel believed that play can be used advantageously in education is expressed well and concisely in the following quotation:

As the most characteristic spontaneous activity of the child, play becomes the basis of the educational process in the early years. Resulting most directly from the native interests of the child, it furnishes the best natural stock upon which to graft the habits of action, feeling, and thought approved by the educator. It is through play that the child first represents the world to himself. Consequently it is through play that the educator can give to the child the interpretation of life which he seeks to impart. Through it he can best introduce him into the world of actual social relations, give him the sense of independence and of mutual helpfulness, provide him with initiative and motivation, and develop him as the individual constituting a unit in the social whole.¹

The influence of John Dewey. The person in America whose philosophy has had most influence on the development of education is John Dewey. He has formulated an educational philosophy based on the new social and industrial conditions under which we are living, and has interpreted to the members of society the place of the school in our modern social organization. He has stated that "school should be life, not a preparation for life," and has emphasized the fact that the school should help boys and girls to live successfully now, at the present time, rather than attempt the indefinite and uncertain task of preparing them to meet problems in the future about which we have no accurate knowledge. The application of Dewey's philosophy indicates an activity program in the schools with emphasis on creative self-activity of the pupils.

The advance of scientific knowledge. One of the new forces that has modified the tendencies in physical education to a considerable extent is the advance made in scientific knowledge since the beginning of the nineteenth century. Through the work of Dalton, Faraday, and Liebig the science of chemistry became well organized and important. The perfection of the spectroscope in 1859 and the development of the atomic theory of matter are illustrative of other scientific advances. Charles Lyell, through his *Principles of Geology* published in 1830, influenced strikingly the conceptions of people concerning natural law in its relation to the physical world. Other events of great importance were the publication of Charles Darwin's *Origin of Species*, in 1859, the establishment by Louis Pasteur of the germ theory of disease, and the discovery of the practical use of antiseptics in surgery by Lister, the English surgeon.

The new interest in school health work. These scientific advances served as the foundation for the development of a new interest in school health work. France was the first modern nation to inaugurate

¹ Paul Monroe, *Text-Book in the History of Education*, p. 661. New York: The Macmillan Company, 1905. Quoted by permission of the publishers.

health work in the schools when in 1833 the school authorities were made responsible for the health supervision of school children. Other European nations undertook work of this kind at different times, but it was not until 1896, when the city of Wiesbaden in Germany established a well organized and definite plan, that any substantial progress was made in the development of a workable and comprehensive program of health supervision in the schools. This plan provided for the medical examination of all children before entering school; the examination of all children at least three times during their school career, usually in the fourth, sixth, and eighth grades; the examination of individual pupils referred to the physicians by the teachers; an accurate record of the physical condition of each child; an intensive follow-up of the examinations in order to urge the parents to have the physical defects of their children corrected; and the inspection of the school buildings.

Boston was the first city in the United States to begin work of this kind. Fifty physicians were employed in 1894 in an effort to prevent epidemics in the schools. Other cities followed this lead, and at present most city school systems and some counties are attempting some kinds of school health work.¹

The idea underlying all of the early work in the field was to provide a means for the control of contagious diseases and to keep down epidemics among school children. From this rather restricted beginning have grown elaborate programs of health education requiring the services of physicians, nurses, dentists, dental hygienists, nutritionists, supervisors of health education, and specialists of other kinds. The better programs of health education at the present time attempt not only to prevent the spread of communicable diseases in the schools but to provide boys and girls with the necessary knowledge, habits, and attitudes to enable them to live healthfully both as individuals and as members of the social group.

The interest of the American public in the health of children has been stimulated by the reports on the examination of drafted men during the World War which showed that about one-third of the young men of the nation were unfit for active military service, by the results of health surveys of city and rural children which have shown that at least 90 per cent of school children are handicapped by physical defects,² and through the efforts of voluntary health organizations (particularly the American Child Health Association) which have

¹ James F. Rogers, *School Health Activities in 1930*. Summary of Information Collected for the White House Conference on Child Health and Protection. U. S. Office of Education, Pamphlet No. 21. Government Printing Office, 1931.

² Thomas D. Wood and Hugh Grant Rowell, *Health Supervision and Medical Inspection of Schools*, pp. 260-61. Philadelphia: W. B. Saunders Company, 1927.

helped to interpret to the entire population the health needs of children and have carried out some valuable studies and researches in the field of health education.

Influence of social and political movements on physical education.

The original purpose of education both in Europe and in America was to promote literacy and to prepare the members of society to be better citizens. At a later date education was recognized as an important agency for the promotion of nationalism and the formation of public opinion. As society changed and the interests and needs of the people became wider and more varied, education was called on more and more to help in making adjustments to the rapid changes taking place.

Among the movements that caused great change and reconstruction in American society were the immigration from many different nations of thousands of people who brought with them the ideals and customs of the countries from which they came; the extension of the franchise to all men and women, which practice helped to emphasize the democratic doctrine of "equality of opportunity"; the activities known as the Industrial Revolution, which brought to an end hand-craft manufacturing by craftsmen in the home and the small shop and assembled large numbers of people in towns and cities to work in factories; the educational and legislative concomitants of the Industrial Revolution which resulted in an increase in the number of secondary schools, a more adequate provision of educational opportunities for the masses of the people, child-labor legislation, and compulsory school attendance legislation; and the establishment of colleges of agriculture and mechanic arts in most of the states as the result of the passage by Congress, in 1862, of the Morrill Act which provided through federal land grants for the establishment of such institutions, and specified that military training must be provided in each of these land-grant colleges.

Each of these movements affected the development of education and of physical education in America. A type of physical education adapted to the temperament and interests of people brought up under American conditions and ideals is clearly not the type suited to the needs of the vast hordes of immigrants who have come to this country; with the wide extension of the franchise and the general acceptance of the fundamental principles of democracy there arose a demand that the developing public schools provide equal opportunities in all phases of education for all the children of all the people; the Industrial Revolution and the changes that went with it completely changed the established ways of living, of work, of recreation, and of education of a considerable part of the population of the country, thereby creating new and different demands on education; and the Morrill Act with its

requirement of military training influenced the physical education programs in the schools of the country to a considerable extent and helped to give a military and formal slant to this part of education for a period of approximately twenty years.

The influence of German physical education on the American program. In preceding paragraphs the work and influence of Basedow, who established the *Philanthropinum* at Dessau, and of Guts Muths who taught in Salzmann's naturalistic school at Schnepfenthal have been discussed. These men made most valuable contributions to the progress of physical education in Germany and laid a good basis for the work of Friedrich Ludwig Jahn (1778-1852) who probably had more influence than any other person on the development of the German program of physical education.

As a boy and young man Jahn traveled a great deal, and his career as a student was somewhat irregular and checkered. These varied experiences no doubt helped in developing his ideals of nationalism and German Unity which he worked for throughout a number of years. Jahn was present at the battle of Jena on October 16, 1806, and was with the German soldiers in their flight after the army of Friedrich Wilhelm III had been so decisively and disastrously defeated by the French. His intense patriotism no doubt caused him to feel keenly the humiliation of the Germans brought about by the Treaty of Tilsit (July, 1807) which took from Prussia approximately half her territory and made her subservient to Napoleon.

Following his experience at the battle of Jena an opportunity came to Jahn to teach in a school in Berlin. While in this position he began taking his pupils on walks and outings and taught them to swim in a stream that was close to the school. From this beginning developed regular periods in which he would meet groups of boys and lead them in their exercises and games. He never let an opportunity pass to talk and teach the Unification of Germany. The interest in Jahn's work spread to many places in Prussia and the other German states and *Turnplatze* became quite common. The followers of Jahn in Germany and America organized the exercises that were used by the turners into definite and formal systems of gymnastics. This type of work was not the original plan that Jahn had when he began leading boys in physical activities. Leonard says:

It was hardly in Jahn's nature to be systematic, and such a thing as a formal school of gymnastics was foreign to his purpose. The essential thing was the active, wholesome, common life in the open air, and especially the games, training the boys to work together in harmony, and he sought also to

kindle in them a public spirit which might some day be of service to the nation.¹

The primary incentive of Jahn and of all who attended the *Turnplatze* was a love for the Fatherland. To build up a spirit of nationalism and to develop strong soldiers for the German armies were paramount objectives. The efforts along these lines bore fruit rapidly, and when Friedrich Wilhelm III initiated the War of Liberation on March 17, 1813, most of the *Turners* promptly joined the army. The service in the army by large numbers of men from the different German states did a great deal to spread the idea of German Unity. More and more the masses of the people began to realize that the best interests of all the states of Germany would be enhanced by the formation of a more closely organized government. After the defeat of Napoleon at Waterloo on June 18, 1815, the German people looked forward to great progress in government and politics, and to the rapid development of free institutions. They were to be disappointed, however, by the turn that affairs took.

Political persecution of Jahn. The Germanic Confederation of 1815 was a poor substitute for the vigorous empire which the common people had expected when they responded to the call to rise against Napoleon. They had hoped the War of Liberation would result in a strong union of the German states, freedom from the foreign yoke, and the establishment of constitutional government in the place of the rule of absolute monarchs. The policy adopted by the Holy Alliance was reactionary and was not conducive to the stimulation of constructive thought on the part of the masses of the people nor to the spread of new ideas. Jahn and his followers were known to be enthusiastic advocates of German nationality and firm believers in constitutional government. The antagonism of the ruling German Monarchs to these popular ideals caused decrees to be issued dissolving the *Burschenschaft* and prohibiting the operation of the *Turnplatze*. Jahn was arrested in July, 1819, and was released from arrest in May, 1820, but it was not until 1825 that he was finally absolved from all guilt in connection with revolutionary acts and propaganda. He remained under police surveillance until 1840 when Friedrich Wilhelm IV came to the throne of Prussia. Following the removal of all police restrictions he was decorated with the Iron Cross. In 1842 a cabinet order reinstated gymnastics as a part of popular education, and the gymnastic societies began to revive in Prussia.

Migrations of Germans to America. The policy of reaction and

¹ Fred Eugene Leonard, *A Guide to the History of Physical Education*, p. 89. Philadelphia: Lea and Febiger, 1927. Quoted by permission of the publishers.

persecution adopted by the Holy Alliance caused many Germans who believed in Democratic principles and a Republican form of government to come to America. These migrations began about 1810 and continued in large numbers until about the time of the American Civil War. Three names that stand out prominently in the history of German gymnastics in America are Charles Follen, Francis Lieber, and Charles Beck. All of these men had been associated with revolutionary groups in Germany and had come to America to escape political persecution. Beck was teacher of Latin and gymnastics at the Round Hill School, Northampton, Massachusetts, and later was Professor of Latin at Harvard University. Follen was Professor of German and superintendent of the gymnasium at Harvard University. He also established the first gymnasium in the city of Boston. Lieber, when he first came to America, succeeded Follen as director of the Boston gymnasium. He was the first editor of the *Encyclopedia Americana*, the first volume of which appeared in 1829 and the thirteenth volume in 1833. For a period of approximately twenty years he was Professor of History and Political Economy in the University of South Carolina. From 1857 to 1865 he was Professor of History and Political Science in Columbia College, New York City, and from 1865 until his death in 1872 he was Professor of Constitutional History and Public Law in the Law School at Columbia. These men were pioneers in the development of a physical education program in America. Although the interest waned in the particular work that they started, their influence has been felt in the physical education program even up to the present time.

About the middle of the nineteenth century the immigration of German refugees reached its peak. These people settled in communities throughout the United States and in many instances organized *Turnvereine* for the purpose of carrying on gymnastic practice and patriotic programs. In the cities where the organizations existed they were usually quite active and influential in bringing about the introduction of physical education in the public schools. It is probably true that during the period from 1850 to 1900 the organization of *Turners* was the most important force in the promotion of physical education in America.

The influence of Swedish physical education on the American program. The program of physical education in Sweden that has exerted a great influence on the development of physical education in America was originated by Per Henrik Ling. The main incentives that stimulated him in this work were of a patriotic nature of much the same kind as those which had motivated Jahn in the development of the German system of gymnastics. In 1807 the French troops

occupied all of the Swedish territory south of the Baltic; in 1808 the Russians invaded Finland which was a part of Sweden; and during the same period the Danes invaded the southern provinces of Sweden. These military and political reverses made Ling eager to develop a nation of strong men for the army and to build up a spirit of nationalism that would enable Sweden successfully to resist the inroads of other nations.

Ling organized his program into three parts: medical gymnastics, educational gymnastics, and military gymnastics. He attempted to base his work on sound scientific foundations, and foresaw that "it must therefore change and develop with every advance in the sciences upon which it rests."

The development of Swedish gymnastics in America had its center in Boston and was helped greatly through the generosity of Mrs. Mary Hemenway, who paid for the training in Swedish gymnastics of a large number of Boston teachers and who financed a demonstration in the Boston public schools for a year. She and her assistant, Miss Amy Morris Homans, were responsible for the Conference on Physical Training that was held in Boston in 1889.

Two persons who were most active in teaching and promoting Swedish gymnastics in America were Nils Posse (1862-95) and Hartvig Nissen (1855-1924). Other names that were prominent in connection with the Swedish influence were Jakob Bolin, Louis Collin, and William Skarstrom. During a period of twenty-five years beginning about 1890 the advocates of Swedish and German gymnastics spent a considerable portion of their time debating which of the two systems was the better. Since the development of the playground movement, the great popularity of athletics and sports, and the emphasis on the educational aspects of physical education the systems of gymnastics have ceased to occupy the most important place in American programs of physical education.

Physical education in Denmark. The history of physical education in Denmark is closely associated with the work of Fraz Nachtegall (1777-1847). It was largely through his influence that Denmark was the first European country definitely to put a required program of physical education in the schools. The program developed by Nachtegall and his successors contained very little that was new or original, but they did do a good piece of work in adopting the German and Swedish programs to fit the needs of the Danish people. The original program as outlined by Nachtegall showed very definitely the influence of the writings and teachings of Guts Muths and of the German program of physical education.

The development of physical education in Denmark was effected

decidedly by political, military, and patriotic influences in much the same way as were the German and Swedish programs. After the introduction of physical education in the schools about the beginning of the nineteenth century, the teachers and inspectors were military men detailed from the army for this work. There was considerable reaction against this policy at different times, but the military domination continued until 1904, when K. A. Knudsen was appointed state inspector of gymnastics, he being the first non-military man to occupy this position.

Danish physical education does not seem to have exerted any appreciable influence on the development of the American program. Probably the most direct influence has been the work of Neils Bukh in the Folk High School at Allerup. He has developed a system of fundamental or primary gymnastics based on the work of Ling but radically different from Swedish gymnastics as taught to-day. Bukh emphasizes mobility, strength, and agility, and uses a number of stretching exercises to achieve his results. In 1925 he made a tour of the United States with a group of his students and created considerable interest through the excellence of the demonstrations that he gave. It does not seem, however, that his work has influenced American practice to any considerable degree.

The English influence. The athletic and play interests of the American people seem to be very largely the result of English influence. Sports and games have always been a feature of life in England. During some periods the interest has been greater than at others, but from the earliest times of which there is any record all classes of society in England have participated in sports. Our interest in football and in track and field athletics is the result of direct borrowing and importing activities practiced in England. Archery, tennis, rowing, swimming, golf, squash, and handball have all been brought to America from Great Britain or have been influenced in their development in America by British practices and ideals.

Football is the oldest English sport. It was not until the eighteenth century that football in the English schools began to occupy an important place as a definitely organized game, but for three or four centuries before this time a game of football had been played in English towns.

Two types of football that evolved in the schools of England resulted in the Association and Rugby games, the Association football being a "dribbling" game and Rugby providing for running with the ball and tackling. In the latter part of the nineteenth century, games of football, modeled after the English games, were developed in the eastern colleges in America. It was in 1872 that representatives of

Yale, Rutgers, Princeton, and Columbia met in New York and formed the first intercollegiate athletic association for the purpose of conducting intercollegiate contests in football and of formulating a uniform set of playing rules.

The playground movement. The Playground and Recreation Association of America, which is now the National Recreation Association, was organized at a meeting held in Washington, D. C., in 1906. Since that time the growth of interest and activity in the playground movement has been rapid. There had been some development of playgrounds in the cities of the United States, beginning with the provision of sand piles in Boston in 1885, but these early efforts were directed toward providing a limited amount of recreation for the children who remained in the congested sections of the cities during the summer months. The grounds were usually in charge of a matron whose main duty was to watch the children at their play.

The United States began its playground development later than some of the countries of Europe. For example, the Copenhagen Playground Association was formed in 1891, and in 1897, the National Committee for Promoting Group Games among School Children was organized in Copenhagen. In Germany the Central Committee for the Promotion of Games in Germany was formed under the leadership of Von Schenckendorff in 1891. Both of these organizations came into existence after an interest in games and playgrounds had been keenly alive for several years.

Although the playground movement in the United States is comparatively young, the efforts of the leaders in this field have influenced and helped to reshape the school programs of physical education so that these programs are now better suited to the interest and needs of the pupils. The present emphasis on play and athletics rather than on gymnastics is no doubt due partially to the influence of the new demands for education for leisure. The present widespread interest in wholesome recreation is indicated to some extent by the number of play areas and recreational facilities and by the number of employed recreation leaders that are provided by the cities of this country. The yearbook number of *Recreation* for June, 1931, reports that during 1930 a total of 980 cities maintained more than 13,000 separate play areas and employed approximately 25,000 recreation leaders. The total of expenditures reported for public recreation was more than \$38,000,000. This was an increase of \$5,000,000 over the preceding year in spite of the fact that the year 1930 was a year of serious economic depression.

Physical education in the Young Men's Christian Association. When the Young Men's Christian Association was first established

the plan was to provide a meeting place where young men who were particularly interested in the study of the *Bible* could gather for discussion and study. As the movement spread some of the leaders in the organization began to realize that the development of Christian character could be advanced through participation in a wholesome physical activity program. This emphasis caused gymnasiums to be provided in the new buildings that were erected. The first association buildings which included gymnasiums were dedicated in New York and San Francisco in 1869. By 1890 there were nearly 200 Y.M.C.A. gymnasiums. This rapid growth of the physical departments in the Associations created a demand for some provision for training leaders and instructors, and resulted in the establishment of a department of physical training in the Young Men's Christian Association Training School, at Springfield, Massachusetts.

The teachers in this new department were Robert Jeffries Roberts and Luther Halsey Gulick. Roberts had several years of experience as director of the gymnasium of the Boston Young Men's Christian Association and at the time of his election to the position at Springfield was probably the most prominent and well-known person in physical education work in the Association. He was an outstanding athlete, gymnast, and weight lifter, but he had concluded as the result of his observations and experiences that heavy, complicated, and difficult exercises were not suited to the needs of most people. The program that he developed emphasized the fact that all exercises should be "safe, short, easy, beneficial, and pleasing."

Dr. Gulick was director of the physical education department at Springfield from 1889 to 1900. Dr. James Huff McCurdy succeeded Dr. Gulick as director of the physical course and has directed its growth, including opportunities for graduate study, since that time.

The influence of the Y.M.C.A. on the development of physical education in America has been fundamental and extensive. The physical education leaders in this organization have developed a gymnasium program that might appropriately be called the American system; they have interpreted and popularized physical education in communities in all sections of the country; and they have organized, systematized, and invented activities which have been valuable additions to the content of American physical education programs. An example of this latter contribution was the invention of the game of basketball by Dr. James Naismith in 1891 while he was teaching at Springfield.

The effect of the world war on physical education. We have seen how military and political exigencies influenced at times the development of physical education in Germany, Sweden, and Denmark. In the United States the Civil War accompanied by the

Morrill Act and followed by the aggressive work of Captain Alden Partridge, who conducted a vigorous campaign over a period of years for the promotion of military training and physical education, stimulated a renewed interest in physical education. The World War with its great demand for efficient man power and the results of the medical examination of drafted men, which showed that approximately one-third of the young men of the country were unfit for unrestricted military service, created a demand for physical education and health instruction with the result that most of the states passed mandatory laws requiring the teaching of physical education to all school pupils.

The work of modern leaders in physical education. In the United States a few persons have made definite contributions which have influenced directly the development of physical education. Outstanding among this group are Dio Lewis (1823-86), Edward Hitchcock (1828-1911), E. M. Hartwell (1850-1922), Dudley Allen Sargent (1849-1924), Thomas D. Wood (1865-), Jesse F. Williams (1886-), and Clark W. Hetherington (1870-).

Dio Lewis. One of the earlier leaders, Dio Lewis, was a physician who apparently possessed a dynamic and contagious enthusiasm for physical education. A valuable piece of work he contributed was the organization of gymnastic exercises in such a way that they made an appeal to men, women, and children and not merely to a limited group of enthusiasts. Probably his most important service was the stimulus that he gave to physical education through his aggressive efforts to interpret its values to the entire country. He wrote a great deal and made a large number of public speeches in all parts of the country. He was instrumental in helping the schoolmasters of the nation and the people generally to understand the importance of teaching physical education to all the children in all the schools, and in popularizing the idea that the gymnasium and the athletic field were educational laboratories, not the habitat of pugilists and professional strong men.

Although the immediate work of Dr. Lewis was not of the kind to be of a permanent and lasting nature, he made possible and prepared the way for the work of others who followed him on a more scientific basis.

Edward Hitchcock. At Amherst College, Dr. Edward Hitchcock became director of physical education in 1861 and continued in that position for almost fifty years until his death in 1911. He emphasized the importance of making every effort to place the physical education program on a sound scientific basis. He is probably best known on account of his work in anthropometry. During his work at Amherst he kept a record of a number of bodily measurements

taken each year of each student. He published the results of this work in 1887 in his *Anthropometric Manual*. Hitchcock was the first president of the American Association for the Advancement of Physical Education, which was organized in Brooklyn in 1885, and took an active part on the programs of the early meetings of this organization.

Edward M. Hartwell. During the last half of the nineteenth century, Dr. Edward M. Hartwell had considerable influence on the development of physical education in the United States. He had a broad preparation in the field of biology, having received the A.B., A.M., and LL.D. degrees from Amherst; the Ph.D. degree in biology from Johns Hopkins, and the M.D. degree from Miami Medical College in Cincinnati. This background of scientific training enabled him to emphasize in his work the scientific aspects of physical education. He traveled extensively in this country and in Europe, and wrote a number of articles on the physiology of exercise, mechanotherapy, and other subjects related to physical education. Hartwell was director of physical education at Johns Hopkins University from 1882 to 1890. From 1890 to 1897 he was director of physical education for the Boston public schools and his five reports published during this time are an interesting and valuable record of physical education in this period. In 1884 he made a study of physical education in colleges and universities for the United States Bureau of Education. This report, *Physical Training in American Colleges and Universities*, was published in 1886.

He took an active interest in planning a most significant conference on physical education which was held in Boston in 1889. He was assigned the first place on the program and presented a discussion of "The Nature of Physical Training, and the Best Means of Securing Its Ends." This conference was presided over by William T. Harris, United States Commissioner of Education, and was attended by prominent educators from all sections of the country. The physical education leaders submitted to this conference as a proposed school program of physical education, a system of classroom calisthenics. The recommendations of this conference helped to fix on the schools of this country a sterile and meaningless program of formal exercises, and have hindered the development of a program and the acquisition of facilities suited to the educational needs of American children. It has only been within the past fifteen years that any real progress has been made in reorganizing physical education so that it is recognized as a sound educational procedure. It is believed by many persons that the results of this conference of

1889 did more to make static the American program of physical education and to hinder its development than any other influence.

Dudley Allen Sargent. Through his private normal school of physical education and his teaching at Harvard University, Dr. Dudley Allen Sargent exerted an important influence on the development of physical education in the United States. He was a staunch advocate of a physical and medical examination for each person, to be followed by prescribed individual work. In keeping with this principle he developed the wall pulley weights and a number of other pieces of apparatus which would permit individuals to exercise according to the needs of each. This emphasis by Sargent was one of the things that helped to evolve an American program of physical education which was different from the systems that had been borrowed from Germany and Sweden.

Thomas L. Wood. One of the most influential leaders in directing the growth of physical education in conformity with modern educational philosophy during the last quarter of a century is Dr. Thomas D. Wood. The Ninth Yearbook of the National Society for the Study of Education,¹ prepared by Dr. Wood and published in 1910, stated concisely and clearly the principles on which the best present-day theories and programs of physical education are based. In this publication, more than twenty years ago, he stated that certain conditions seem necessary if the best results are to be obtained from physical education.

Wood has had a wide sphere of influence on physical education and on health education through his writings, lectures, consultations, and his long period of teaching in Teachers College, Columbia University. For many years he was chairman of the Joint Committee on Health Problems in Education, of the National Education Association and the American Medical Association. This committee, under Wood's leadership has published a large number of valuable reports. He was chairman of the Committee on the School Child of the White House Conference on Child Health and Protection which was called by President Hoover and assembled in Washington November 19-22, 1930. The report of this Committee contains in condensed form much of the authentic material on the health of the school child.

Jesse F. Williams. Through his writings, teaching, and lecturing Dr. Jesse F. Williams of Teachers College, Columbia University, has had a most comprehensive influence on shaping the development of physical education in America during the past fifteen years. In addition to the enthusiasm and vision stimulated in his students

¹ Thomas Denison Wood, "Health and Education." *Ninth Yearbook of the National Society for the Study of Education*, Part I, pp. 85-91. Bloomington, Illinois: Public School Publishing Company, 1910.

through the influence of his personality he has stated clearly and interpreted well the fundamental bases of physical education. He has indicated the common fundamental principles in physical education and general education. He has stated convincingly the principles of physical education which are based on sound facts, and has insisted that physical education be guided by these principles rather than by rule-of-thumb methods, rules, and directions. He has made clear the fact that all programs of physical education are shaped largely by the political, social, religious, and economic ideals and influences of the times. A statement of the aims and objectives of physical education expressed in understandable terms has been one of his practical and valuable contributions. His work has been influential in helping a large number of persons in physical education and other fields of education to have a better understanding of the values of physical education and of the important place it occupies in the complete education of each individual.

Clarke W. Hetherington. A sound and comprehensive philosophy of physical education has been the outstanding contribution of Clark W. Hetherington to the development of physical education in America. His book, *School Program in Physical Education*, is one of the best available statements of the sociological status of physical education, the objectives of physical education, and criteria for selecting and organizing the activities which make up the school program of physical education.

The work of professional organizations. There are a large number of professional organizations which have been influential in promoting, interpreting, and stimulating physical education, and which have also performed a valuable service in helping to build up a professional spirit on the part of the men and women working in this field.

The American Physical Education Association. The American Physical Education Association has probably been more influential than any other of these organizations. It was organized in 1885 with Dr. Edward Hitchcock, of Amherst College, as president. The organization has grown consistently in strength and influence from year to year, and in 1932 had a membership of more than seven thousand. The Association holds an annual convention and publishes two magazines, *The Journal of Health and Physical Education*, and the *Research Quarterly*. Every person engaged in any aspect of physical education, health education, or recreation should be a member of this national professional organization; should read its publications regularly; should attend the annual conventions; and should take an active interest in the policies, work, and business affairs of

the Association. A strong and efficient professional organization is one of the characteristics of any profession, and if physical educators expect to have a professional status it is essential that most of the practitioners in the field be active and aggressive members of their national organization.

The National Recreation Association. In 1906 the Playground Association of America was organized at a meeting of a number of educators and social workers in Washington, D. C. This organization is now known as the National Recreation Association. When it was first organized the efforts of the Association were directed toward the promotion of interest in playgrounds and in directed play in connection with the schools. The work, program, services, and influence of the organization have expanded so greatly that now a city without a program of organized recreation is usually looked upon as being negligent in rendering the public services which the citizens have a right to expect. Not only has the National Recreation Association provided excellent leadership for the recreation movement in the United States, but it has also played a most important part in the development of physical education. Since 1918 it has maintained, as part of its work, the National Physical Education Service. The personnel of this service have worked with educators, legislators, and governors in the interest of physical education and have been influential in securing the passage of much of the legislation favorable to physical education. The director of this service works in close cooperation with the state directors of physical education. The Association publishes a monthly magazine, *Recreation*, which is the official publication for recreation workers in this country. It contains much valuable and interesting material for persons in physical education.

Women's Division. In the field of athletics for girls and women the Women's Division of the National Amateur Athletic Federation, which is a federation of several hundred organizations, institutions, and individuals, has played an important part in determining policies and programs. The chief functions of this federation are: "first, to encourage the promotion of sports and games for *all* girls and women. Second, to establish such ideals and principles in connection with sports and games as will make it certain that these sports and games are being wisely chosen, wisely promoted, and wisely supervised."¹ The ideals of this group have been a definite and positive influence in shaping a constructive and practical philosophy for the guidance of athletics for girls.

¹ Agnes Wayman, "Women's Division of the National Amateur Athletic Federation," *Journal of Health and Physical Education*, III (March, 1932), 4.

The American Child Health Association. The American Child Health Association, which came into existence shortly after the World War, has made a great contribution to the cause of child health. This organization has served an important function in making the American people conscious of the health needs of their children, in encouraging and financing research in the field of child health, in stimulating an enthusiastic professional spirit on the part of professional workers in this field, and in pointing out the need for better opportunities for the professional preparation of the personnel in health education. The Association has published a number of books and bulletins which are accurate, authentic, and helpful. Every person engaged in teaching should become familiar with the content of the publications of the Association as they appear from time to time.

Other Organizations. Among the other organizations that are important in the field of physical education are the Amateur Athletic Union, which attempts to set standards and regulate competition among amateur athletes; the National Federation of State High School Athletic Associations, which attempts to maintain uniform eligibility rules among the various states, endorses the footballs and basketballs of one manufacturer, and publishes a football rules book; the Women's College Directors' Societies, which includes the eastern, mid-west, and western organizations of women who teach physical education in colleges; the Society of Directors of Physical Education in Colleges, which is the organization of men directors of physical education in colleges; and the professional organizations of different types of specialists in the field, including the National Association of Basketball Coaches and the American Football Coaches Association.

Summary. The changes that took place during the eighteenth century throughout the western world influenced American institutions and the way that people thought about social, political, religious, and economic problems. Among the leaders in the reform movement in France was Jean Jacques Rousseau. The liberalism of his ideas and proposals furnished the inspiration for a program of education to prepare citizens for life in a democratic society. The influence of the work of Johann Basedow in his naturalistic school at Dessau made a permanent impression on the schools of Germany. He advocated following nature and the use of natural methods in the education of children. His was the first school in modern Europe which, although it was for children from all social classes, included in its curriculum daily instruction in physical education for all pupils.

The work of Johann Friedrich Guts Muths in Salzmann's school at Schnepfenthal, the writings and teachings of Pestalozzi, the educa-

tional theories of Herbart and Froebel, and the philosophy of John Dewey, all have made important contributions to the development of education and physical education.

The rapid advance in scientific knowledge since the beginning of the nineteenth century, and the new interest in school health work have helped to shape programs of education. The great social and political movements which have taken place in America within the past century have also been important factors in influencing the development of educational ideals and programs.

The immigration to the United States of large numbers of persons from Germany and Sweden exerted an important influence on the development of physical education in this country during the nineteenth century. Many of the disciples of Jahn from Germany, and of Ling from Sweden, were most enthusiastic promoters and advocates of physical education in America. The work in physical education in Denmark has attracted some attention in this country, but it does not seem to have influenced American practice to any considerable degree. The athletic and play interests of the American people seem to be very largely the result of English influence.

The playground movement, the Young Men's Christian Association, the World War, and the work of professional organizations and of many modern leaders in physical education have been influential in the development of physical education in America.

QUESTIONS

1. What social, philosophical, and political movements culminating during the eighteenth century had much influence on the development of education and physical education?
2. What were some of the main planks in Rousseau's educational platform?
3. What contributions did Basedow and Guts Muths make to the development of physical education?
4. What were some common principles in the teachings of Pestalozzi, Herbart, and Froebel?
5. What are the main contributions of John Dewey to American Education?
6. How did the developments in science during the nineteenth century influence physical education?
7. What social and political movements in America during the past hundred years have exerted important influences on the development of physical education?
8. In what ways have social and political developments in Germany and Sweden influenced physical education in America?
9. What has been the main English influence on the American program of physical education?
10. What have been the main contributions to American physical education of the Young Men's Christian Association and of the playground movement?

11. What have been the contributions to the development of American physical education of some of the modern leaders in this field?
12. How have the various professional organizations influenced the development of physical education?

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CHAPTER IV

THE AIMS AND OBJECTIVES OF PHYSICAL EDUCATION

The meaning of aims, objectives, and goals. The terms *aims*, *objectives*, and *goals* are used interchangeably by many people. What one person means when he uses the word *aims*, may be the connotation of *objectives* as used by another. There is no reason for using these terms in any particular sequence but in order that there might be some basis of agreement for the purposes of this discussion, the following distinctions are suggested:

Aims are the main, big, general things toward which all education is directed. *Objectives* are more specific and definite things that lead up to the aims and help in achieving them. *Goals* are still more explicit and specific things, the accomplishment of which will help in attaining one or more of the objectives and thereby contribute to achieving the aims. For example, if we agree with Herbert Spencer that the aim of education is "complete living," one of the objectives of education which would help in achieving "complete living" might be the "preparation for the worthy use of leisure," and a goal that would contribute toward the accomplishment of this objective could well be to develop in all persons enough skill to enable them to play golf satisfactorily.

The nature of education. If a small boy who has never had any experience with a baseball is directed to catch a pitched ball, he is likely to extend his arms rigidly with the palms of his hands toward the pitcher and receive the impact of the ball on the palm of one hand. This reaction usually results in his missing the ball and receiving a decided jolt along the arm and shoulder. In this case the boy has a new experience that will condition his other play experiences, especially the ones that have to do with baseballs, and will result in the reorganization of his experiences. Education has taken place because the boy has had experience that will help him to adjust to situations in his environment. The next time he attempts to catch a pitched ball, he will be likely to modify his method of catching, and after numerous experiences, will learn to hold his arms and hands in a somewhat relaxed position and to give or accommodate to the force of the ball as it is caught. In this instance the experiences of

the boy have been added to and reconstructed in the light of, or under the influence of, a new experience.

When a boy is born, and for a period of months following his birth, he has no interest, needs, or desires in connection with baseball. But as he grows older, plays with other children, attends school, visits playgrounds, and has a wide variety of experiences that involve baseball, he develops baseball desires. He desires to be able to catch a ball, to bat it, to pick up a grounder, and to throw accurately. He soon desires a mit, a glove, a ball, a bat, and a uniform. These desires have developed as the result of experiences and the keener or more intense the desires, the greater is the effort the boy will put forth to satisfy them. The wider, more varied, and meaningful, have been the experiences of an individual, the better educated and more intelligent he will be, the greater the number and extent his desires will be, and the better will be his ability to satisfy his desires.

These illustrations of the small boy and his baseball experiences indicate that education takes place as the result of growth and development of experiences and that the initiative for purposeful effort and other types of behavior come from desires which have resulted from experience. An acceptable definition of education, therefore, is that "education is a process of the continuous reconstruction of experience with the purpose of widening and deepening its social content while at the same time the individual gains control of the methods involved."¹

This definition of education conceives of the process as the sum of all the experiences of an individual from birth to death. There are many people who do not agree with this interpretation and insist that, for all practical purposes, education consists merely of those experiences that take place in connection with definitely organized schools. Since a large part of the physical education program takes place on playfields, in swimming pools, in the woods, on streams, and in camps, it seems to be preferable from the standpoint of physical education to accept the broader conception of education.

Physical education a field of education. For convenience and ease in organization and instruction schoolmasters have arranged the experiences that they believe children usually have or should have into several segments or fields of education. These fields include such divisions of human knowledge and experience as the social studies, physical sciences, biological sciences, vocational education, and physical education, and a number of other fields. All of these fields or divisions are further subdivided into an almost unlimited

¹ From John Dewey, "Education," pp. 398-400, in *Cyclopedia of Education*, edited by Paul Monroe. Quoted by permission of the publishers.

number of subjects. A different and interesting arrangement of subjects under divisions or fields has been made in the reorganization at the University of Chicago. This arrangement is as follows.¹

Humanities division: Philosophy, art, comparative religion, oriental languages, New Testament, comparative philology, Greek, Latin, romance languages, Germanics, and English.

Social sciences division: psychology, education, economics, political science, history, sociology, anthropology, home economics, and geography.

Physical sciences division: mathematics, astronomy, physics, chemistry, geology, and military science.

Biological sciences division: botany, zoölogy, anatomy, physiology, physiological chemistry, hygiene and bacteriology, pathology, physical culture, and the South Side clinical departments (the clinics group).

There are some educationists who are opposed to any arbitrary organization of subject matter into subjects or fields. They believe that the best way for a person to be educated is for him to take part in activity which is largely self-directed. Such purposeful activity should be directed toward the solution of problems that seem to the individual to be important and worth the effort required for their solution. One of the leaders who subscribes to this point of view is Dr. Goodwin B. Watson of Teachers College, Columbia University. He has stated that there are seven trunk lines of education: (1) health, (2) personal relations, (3) vocations, (4) money and goods, (5) social order, (6) recreation, and (7) interpretation of the universe.

According to Watson's plan there would be no formal classes. Each morning the pupil would report to his counselor and plan his work for the day which he would carry out either singly or in a group. Printed materials, books, and equipment would be ready for his use. When he became puzzled with some problem he would go to the expert in the field concerned and ask questions. And the teacher would actually try to answer them. Watson says that "teachers in the health department, for example, probably would be asked if hair tonics are good for dandruff. They also might be asked what causes cold epidemics, why maternity mortality is so high, the effect of noise on nervous systems, how to avoid goiters, what to do for burns, if basketball is a healthful game, are drafts really to be avoided or is that just an old-fashioned idea? All of these things, you see, have to do with life. Is it too revolutionary to suggest that we try to teach them?"²

¹ See *School Review*, XXXIX (February, 1931), 98.

² Goodwin Watson, "The Philosophy of Physical Education." *Journal of Health and Physical Education*, II (September, 1931), 3-6.

Physical education defined. Physical education is a part of education. In some situations it may be taught in definitely organized classes such as exist in the traditional type of school. In other situations the physical education teacher may function as an adviser or guide to children in the solution of their health and recreation problems as suggested by Watson. Under either condition physical education, if well taught, is a process of education through interesting and self-directed activity on the part of the pupils. It is only through activity of the learner that education takes place. No amount of effort or activity on the part of the teacher will result in the education of pupils except to the extent that it brings about activity by them. In physical education there is an unusual opportunity for pupils to participate in activities and to have experiences that have real, understandable meanings to them. They are not studying some abstract subject matter with the hope that it will be of some use to them in later years, but instead they are acting in situations and solving problems which are actually important to them as they are living their lives at the present time.

During the periods in which children are playing, capable teachers can guide and help them to develop desirable ways of behaving toward their teammates, opponents, officials, spectators and in regard to the solution of problems that arise during the games, making deliberate choices as to lines of conduct and intelligent decisions based on reasoning rather than on prejudices or emotions. Taking these facts into consideration, a satisfactory definition of physical education is that *physical education is a way of education through motor activity and related experiences and its subject matter is primarily ways of behaving.*¹

Conceptions of education. The statements of the aim of education have been almost as numerous and varied as have been the different individuals who have attempted to formulate an aim. Hopkins² has quoted sixty different aims of education and has pointed out that in general, all statements of educational aims can be placed in four major groups. These are: first, the statements that indicate a conception of education as *culture*; second, the ones that emphasize education as *discipline*; third, those that recognize education as a process of *growth* or *adjustment*; and fourth, those that point to education as a *preparation* for life, usually adult life.

A more general classification of these statements of aims would divide their proponents into only two groups: those who conceive of

¹ William H. Kilpatrick, "An Effort at Appraisal," *Adapting the School to Individual Differences*, p. 279. The Twenty-fourth Yearbook of the National Society for the Study of Education, Part II. Bloomington, Illinois: Public School Publishing Co., 1925.

² L. Thomas Hopkins, *Curriculum Principles and Practices*, p. 50. Chicago: Benj. H. Sanborn and Co., 1929.

education as a *preparation* for life at some future time, and those who believe that education should be concerned with helping individuals to live most successfully and satisfactorily at the present time. The persons who accept the aims of education included in the first group do not recognize the dynamic and rapidly changing status of the modern world and believe that adults, as the result of their experiences, can successfully prepare the younger generation to meet the definite and specific problems that will arise throughout their lives. The persons whose educational philosophy causes them to subscribe to the aims of education included in the second group, think of education not as a preparation for life but believe that education is life. They believe that our definite and institutionalized educational efforts should be directed toward helping boys and girls to solve their everyday problems, to function successfully in their own social groups, and to get the most real and wholesome satisfactions out of life as they are living it. They believe that the best preparation for a full, rich, and satisfying life in the future is to live a full, rich, and satisfying life here and now, each day, beginning in earliest childhood and extending through old age.

Aims of education in a democracy. The aims appropriate to education in a democracy are radically different from those suitable for education in an autocracy. In the latter the schools are concerned primarily in indoctrinating all classes of people with the same beliefs in regard to the values and desirability of the established government and in keeping the people contented and satisfied with their present position in life. In a democracy the ideal is to provide an educational opportunity for each individual to develop whatever talents he has been endowed with to the highest possible degree. The democratic idea was prevalent in the early history of America that all men are created equal. This conception in its application to education has undergone a change since the beginning of the nineteenth century so that it is now recognized as the function of the state to provide an "equality of educational opportunity." This interpretation of the principles of democracy as applied to education has sometimes been stated in more popular language as "every child an equal chance." However, equality of educational opportunity does not mean that all children should have the same education. It means that each child, according to his ability and capacity, should be provided with the kind of education best suited to develop his innate qualities to the greatest possible extent. The established facts concerning individual differences among children makes this interpretation of democratic ideals more practical and acceptable than the original conception that all persons are of equal intellectual capacity.

The Commission of the National Education Association on the Reorganization of Secondary Education has stated that "the purpose of democracy is so to organize society that each member may develop his personality primarily through activities designed for the well-being of his fellow members and of society as a whole." It is seen, therefore, that although the fundamental principles of democracy recognize the right of each child to an education adapted to his individual needs and capacities, democracy also demands that the interests of society be recognized by each individual. This responsibility of each person for the interests and welfare of the community seems frequently to be overlooked by both teachers and pupils. Within the past few years a great deal has been written and said concerning the responsibility of the schools for providing an educational program suited to the individuality of each pupil. No doubt there is much room for adaptation in this regard, but it should be remembered, meanwhile, that society is providing the education for boys and girls and that it therefore is entirely justified in expecting that each of these persons makes some contribution to the good of the group.

These conceptions of education which indicate that it is a process of achieving successful living in a democratic society lead to the statement of the aim of education as follows: "Education in a democracy, both within and without the school, should develop in each individual the knowledge, interests, ideals, habits, and powers whereby he will find his place and use that place to shape both himself and society toward ever nobler ends."¹

The objectives of education. In order to work understandingly toward a general aim it is necessary to analyze it into several more detailed and specific objectives. Breaking up the aims of education into smaller working units so as to be able to determine objectively the results achieved is an important step in the solution of any educational problem. Teachers and pupils would probably find it difficult to work toward "shaping themselves and society toward ever nobler ends" but they could no doubt work quite intelligently toward learning activities that would prove of value during leisure time or practicing health rules that would help in preventing the spread of disease.

Many writers have attempted to make a satisfactory statement of the more definite objectives of education. These statements have included the objectives of education in general and also of each division of the school such as the elementary school, the junior high school, and the senior high school. Bonser has stated the purpose of the elementary school as follows:

¹ National Education Association, Commission on the Reorganization of Secondary Education, *Cardinal Principles of Secondary Education*, p. 9. U. S. Bureau of Education, Bulletin, 1918, No. 85. Washington: Government Printing Office.

From the standpoint of society, the elementary school is the means by which the child is introduced, with comparative rapidity, to the culture of the race. It is the place where he gains the fundamental knowledge, skill, habits, and ideals of thought, feeling, and action which are necessary for all, regardless of social status, vocation, or sex. It is the institution which provides the integrating or unifying education which is at the foundation of our national life. In a word, it is the function of the elementary school to provide the general basis of health, equally desirable for all; to develop that practical efficiency in activities shared by all in daily work and intercourse; to develop those ideals and habits of civic and other forms of group activity of equal value to all; and to cultivate interests and means of reaction common to all.¹

The junior high school, according to Touton and Struthers,² should strive to influence its pupils so as to achieve the following results:

1. *Healthful living.* Information on healthful living and an appreciation of the ideal of a sound mind in a sound body, with health habits of a high order gained through the conscious application of principles of hygienic living.

2. *Application of fundamental processes to simple scientific and social phenomena.* An increased command and an appreciation of the importance of the fundamental processes gained through their application in simple scientific and socially worth-while situations provided by the subject-matter and social programs of the school.

3. *Discovery of interests and aptitudes.* Information on the pursuits of mankind, with a variety of experiences gained through doing the ordinary unspecialized tasks in one's daily activities and through prescribed cultural and prevocational contacts giving a basis for educational and vocational guidance.

4. *Maximum use of native capacities.* Information on, and practice in, forming habits of developing to the full one's physical, mental, social, and moral resources, securing for the individual the maximum development in resourceful living, and insuring one's richest contribution to society.

5. *Participation in a variety of esthetic and recreational activities.* Information on a variety of esthetic and recreational activities, habits of participating in many of these during leisure hours, and an appreciation of their value in leisure-time activities after school life is over.

6. *Membership in the school group.* Knowledge of responsibilities implied in group membership and an appreciation of the value of high ideals in civic community life gained through habits of coöperating in worthy school enterprises and in establishing group ideals.

7. *Establishing and maintaining high standards of conduct in personal and group life.* Information on social customs, regard for high moral standards, habits of responding in socially approved ways to the stimuli which life affords, developing thereby respect for established laws, strong ethical charac-

¹ Frederick G. Bonser, *The Elementary School Curriculum*, p. 62. New York: The Macmillan Co., 1923. Quoted by permission of the publishers.

² F. C. Touton and Alice B. Struthers, *Junior-High-School Procedures*, pp. 8-10. Boston: Ginn and Company, 1927. Quoted by permission of the publishers.

ter, reverence toward God, with practice in stimulating others to their best efforts in improving existing standards of conduct.

8. *Contributing to worthy home life.* An appreciation of worthy ideals and knowledge of worthy examples, with practice in developing habits of performing many units of activity which contribute to worthy home life.

9. *Evaluating the past and determining its contributions to the present.* Information on peoples and events of the past and an appreciation of their contributions to human progress with habits of evaluating the activities of racial and national groups and events of past in terms of the then existing standards and at the same time recognizing their contributions to present-day standards.

10. *Understanding the significance of larger group relationships of the world to-day.* Information on the family; appreciation of the religious, economic, industrial, and political interdependence of individuals and groups, developing broad, sympathetic understanding and tolerance for the view of others; recognition of the various phases of social progress.

The objectives of the senior high school, as stated by Inglis are:

1. The preparation of the individual as a prospective citizen and co-operating member of society—the Social-Civic Aim;

2. The preparation of the individual as a prospective worker and producer—the Economic-Vocational Aim;

3. The preparation of the individual for those activities which, while primarily involving individual action, the utilization of leisure, and the development of personality, are of great importance to society—the Individualistic Avocational Aim.¹

The "Cardinal Principles." The statement of the objectives of education in general that has received the widest acceptance and been most often quoted is that made by The Commission on the Reorganization of Secondary Education. The report of this Commission stated the following as the main objectives of education: (1) health, (2) command of fundamental processes, (3) worthy home membership, (4) vocation, (5) citizenship, (6) worthy use of leisure, and (7) ethical character.²

A critical analysis of these different statements of the objectives of education reveals the fact that there is much in common among all of them. It is interesting, furthermore, to observe that physical education can make a very definite contribution toward the achievement of most of these objectives. The development of the organic systems of the body is stimulated by vigorous activity, and it is the normal and efficient functioning of these systems, together with free-

¹ Alexander Inglis, *Principles of Secondary Education*, p. 368. Boston: Houghton Mifflin Company, 1918. Quoted by permission of the publishers.

² *Cardinal Principles of Secondary Education*, pp. 10-16. U. S. Bureau of Education, Bulletin, 1918, No. 85. Washington: Government Printing Office.

dom from disease, that results in the state of being which is ordinarily spoken of as health. Children who are interested in doing well in the various physical education activities are eager to follow the rules of health in order that they might be stronger and free from handicaps to achieve success in their games, sports, and outing activities. This is the same type of interest and motivation that causes high school and college athletes to discipline themselves rigorously in observing training rules.

The interest initiated by participation in physical education frequently leads boys and girls into other activities which increase their knowledge and skills in the tool subjects such as reading and arithmetic. An example of this is a class of small children who were learning an Indian dance. They became interested in the Indians who originally performed this dance, where and how they lived, their language, customs, traditions, occupation, dress, and what became of them. This interest resulted in the pupils' carrying on a type of study, research, and discussion which would have done credit to a group of much more mature individuals. Another illustration is the case of an elementary school boy's recreation club that was building a cabin in the woods. The members of this club learned many things during the process of planning and completing this cabin, that one would ordinarily expect only of students several years older than were these boys. The instances in which interest in games leads children to read newspapers, magazines and books, to use the principles of the right angle triangle in laying out a court or diamond, and to practice arithmetic skills in figuring team standings and percentage, are other examples of how physical education can help in giving children a command of the fundamental processes.

Worthy home-membership is another objective of education which physical education can help boys and girls to achieve. A direct contribution is the teaching of games and other events that can be used as part of the recreation program in the home. Then, too, physical education provides exceptional opportunities for teaching pupils to exercise tolerance, coöperative effort, and loyalty to ideals. Some of the duties of citizenship can advantageously be emphasized as part of physical education. These duties include active participation in choosing good leaders and in supporting and following the leaders who are elected; in formulating laws or rules and securing universal observance of these rules so that the most good may accrue to all members of the team or group; and accepting the obligation of each member of the group to support his share of the common burden and do his share of the work in order that the combined efforts of the team will result to the best advantage of all.

Through developing skills in such activities as tennis, golf, swimming, quoits, horseback riding, handball, squash, archery, canoeing, rowing, rifle shooting, fishing, and in various outing activities physical education helps specifically in preparing individuals for the worthy use of leisure. By teaching fair play, respect for one's opponent, courtesy to the opposing team, respect for officials, honesty in game situations, and good sportsmanship on all occasions, physical education can make a real contribution toward the development of desirable character traits.

The aim of physical education. The general aim of physical education should be practically the same as that of all education. In fact anything that is included in the educational program should conform to the aim of general education, otherwise there is no justification for the place given to it. In the preceding paragraphs we have discussed how education takes place through experiences, and pointed out that experience is the result of the interaction of an organism and its environment. It has also been indicated that the initiative for all behavior, above the lowest levels of a direct response to an immediate stimulus, is the result of wants and needs which have developed through experience. The greater the ability of an individual to satisfy his wants and desires, the more likely it is that he will be able to live successfully.

An aim of physical education, which is so inclusive that it might also serve as the aim of all education, can be stated as follows:

The aim of physical education is to influence the experiences of persons to the extent that each individual within the limits of his capacity may be helped to adjust successfully to society, to increase and improve his wants, and to develop the ability to satisfy his wants.

In considering as part of the aim of physical education "to increase and improve wants, and to develop the ability to satisfy wants," it is important to emphasize the fact that physical education should seek to increase, develop, and satisfy only wants that can be satisfied without annoying or trespassing on the rights of others. A continuous effort should be made to develop unselfish and altruistic wants and to diminish selfish, useless, and harmful wants. In the improvement of our wants we should strive at all times "to cultivate good will to men and the higher or impersonal or unselfish pleasures, and to get rid of irrational wants—wants not fitted to the world in which we live."¹

The objectives of physical education. In order that efforts can be directed definitely toward the achievement of the aim of physical

¹ Edward L. Thorndike, *Education*, p. 18. New York: The Macmillan Company, 1912. Quoted by permission of the publishers.

education, it is necessary to state more specifically the objectives of this work. These objectives must lead up to and contribute to the accomplishment of the aim. The objectives of physical education that are concerned directly with the educational process itself as it involves changes in the pupils are designated as "educational objectives" and the ones that are concerned with providing the program, time, place, staff, and facilities are "administrative objectives."

The educational objectives. In view of the discussion which has been presented concerning the effect on physical education of social, political, economic, and religious influences; and in light of the aims of education in a democracy it seems that physical education should accomplish certain definite results in the schools. The indications are that these outcomes should be concerned particularly with educative experiences, organic development, and preparation for leisure. The educational objectives of physical education may be included in the three statements which are discussed in the following paragraphs:

1. *To provide opportunities for controlled participation in physical activities that will result in educative experiences.* Such participation must provide experiences that insure wholesome expression and control of the emotions, desirable modification of instinctive tendencies, development of social standards and ideals, wholesome self-expression, and a keener appreciation of the fact that each individual is dependent on other members of society for most of the satisfactions of life.

Wholesome emotional expression is essential in the development of a healthy personality, emotional stability, and desirable character traits. The continuous repression of natural interests and urges may result in unsocial behavior and a peculiar or abnormal personality. Physical education is believed to offer excellent opportunities for the wholesome expression of the emotions and the expression of some innate tendencies. It is also claimed that desirable generalizations and attitudes in regard to sportsmanship and other forms of social behavior can be built successfully in connection with participation in games and sports.

Freedom from many of the restraints and inhibitions, which bind people in most situations, may be experienced in playing games. Opportunities for unhindered self-expression are provided in connection with sports. This enables an individual to assert himself, to put forth his best efforts as he chooses, and to achieve a kind of success which can be objectively determined. These values are more likely to be secured when boys and girls participate in activities suited to their interests and abilities at various age levels. Boys in senior high school and in college, for example, usually like to participate in vigorous highly organized team games. It is important, therefore, that the

physical education curriculum be organized to meet the needs and interests of pupils. Some of the activities which should be included in the curriculum in order to achieve this objective would not necessarily contribute directly to the achievement of the other objectives of physical education. Basketball, for instance, might be included in the senior high school program on account of the many educational opportunities which arise in connection with playing the game. It would not, however, make any direct contribution to the preparation of students to participate in physical recreations during their leisure time after they finish school. In a similar way infants might play "patter-cake" and with rattles, and young children play with blocks and mold things in sand for the direct values which come from such activities without expecting any carry over to leisure time in adult life.

2. *To develop the organic systems of the body, to the end that each individual may live at the highest possible level.* In the statement of this objective, it is recognized that the feelings, emotions, thoughts, and actions of persons are influenced to a considerable extent by the physiological processes of the body.

The condition of the muscular system which determines the ability of the skeletal muscles to maintain the trunk and other parts of the body in position for efficient functioning, and which affects the action of cardiac muscle and visceral muscles, has considerable influence on how one feels and the efficiency of his actions. It is probable that the efficient functionings of the digestive system, the excretory system and of the respiratory system have much to do with the vigor and energy that one displays.

The development of the organic systems of the body is accepted as a worthwhile objective because it seems to be true that one can live on a higher level and do better many desirable, interesting, and valuable things when the organic systems of the body are functioning smoothly. The objectives of "health for health's sake" and of a "sound mind in sound body" as ends in themselves are repudiated. The ideal of being healthy in order that one can be of more service to mankind and can get more pleasure and satisfaction out of living is a worthy ideal. The acceptance of this ideal means that we place many things ahead of mere physical health and that it is recognized that there are many situations in life which justify doing things that are bad for one's health. It is probably true that most of the great achievements in science, invention, art, literature, war, government, and family life have been accomplished as the result of actions that were injurious to the health of the persons involved. This point of view does not justify a person in doing things through ignorance, carelessness, or indifference that will effect adversely the bodily organs.

but it does insist that each individual should make an intelligent evaluation of the relative values of various lines of action and follow the one that will result in greatest good to the greatest number.

By using such a standard to guide one's decisions and actions, a person is helped to live in such a way that the most satisfactions accrue to him. It is true that man is more than a sum of his parts. Practically all good, useful, and beautiful things in their use and function are many times superior to the aggregate of their parts. In so prosaic and commonplace a thing as a machine this is true and in the case of man who through many centuries of experience has been changed, modified, and developed so that he is capable of thinking, creating, anticipating, and evaluating, it is an absurdity to think that an accumulation of well functioning parts will result in satisfying living.

3. *To develop skills in activities and favorable attitudes toward play that will carry over and function during leisure time.* It seems to be a fact that people like to do the things they can do well. This is true particularly in the case of physical activities. For instance, if a person can play tennis well, he likes to play tennis; if he can swim well, he likes to swim, and if he is skillful at golf, he likes to play golf. No one likes to be a "dub." This attitude is especially dominant among adults and later-adolescents. If a person during his childhood and youth has many satisfying and pleasant experiences in recreational activities, it is quite probable that he will develop attitudes toward play that will cause him to seek the opportunity to participate in these activities during his leisure time in later life. It is a most worthy objective of physical education, therefore, to develop in all boys and girls enough skill in recreational sports to enable them to participate in these activities successfully and satisfactorily.

Administrative objectives. In order that the educational objectives of physical education can be worked for with some hope of achievement, it is essential to recognize certain administrative objectives that have to do with providing adequate programs, staffs, facilities, time, and curriculums. The American Physical Education Association has adopted a statement of administrative objectives which is quoted here as an acceptable guide in administrative procedures in physical education.

1. An adequate health examination and a comprehensive protection program for every school child, to include control of communicable diseases, healthful school environment, and hygienic standards in the entire curricular and extracurricular life of the school.

2. Adequate indoor and outdoor facilities in every school and adequate time in the curriculum.

3. Coördination of community effort in policies, finances, and use of facilities for programs of health, physical education, and recreation.

4. Health and physical education instruction, based on scientific materials progressively arranged throughout the grades and upper schools, and directed toward personal accomplishment and social ideals.

5. Establishment of procedures for the scientific classification, grading, and promotion of individuals to insure the best educative results.

6. Professionally trained and accredited supervisors and teachers for all branches of the health and physical education program, including the coaching of athletic teams.

7. Promotion of the idea of play and recreation as aspects of the finest living.

8. The accreditation of health and physical education in all schools and colleges for graduation and the acceptance of such credits from high school for college entrance.

9. The organization and administration of health and physical education in schools as a single, executive department, closely integrated and thoroughly coördinated with the general purposes of education.

10. Extension of the desirable and practical measures for the promotion of health and physical education among boys and girls in schools to all members of the community, as the broader implications of education are recognized.

Summary. In this chapter the terms *aims*, *objectives*, and *goals* have been used to designate desired outcomes, ranging from a general statement to a very specific and definite statement. Education is defined in terms of a continuous reconstruction of experience. Physical education is defined as a way of education through motor activity and related experiences and its subject matter is primarily ways of behaving.

The aim of education in a democracy, "both within and without the school should develop in each individual the knowledge, interests, ideals, habits, and powers whereby he will find his place and use that place to shape both himself and society toward ever nobler ends." The aim of physical education is to influence the experiences of persons to the extent that each individual within the limits of his capacity may be helped to adjust successfully to society, increase and improve his wants, and develop the ability to satisfy his wants.

An acceptable statement of the main objectives of education includes: (1) health, (2) command of fundamental processes, (3) worthy home membership, (4) vocation, (5) citizenship, (6) worthy use of leisure, and (7) ethical character.

The educational objectives of physical education are: (1) to provide opportunities for controlled participation in physical activities that will result in educative experiences; (2) to develop the organic systems of the body to the end that each individual may live at the

highest possible level, and (3) to develop skills in activities and favorable attitudes toward play that will carry over and function during leisure time.

QUESTIONS

1. Why is it essential that every teacher know definitely the aims, objectives, and goals that he is trying to achieve through his teaching?
2. What relationship do aims, objectives, and goals have to the selection of subject matter and methods of teaching?
3. What are some of the things that determine the choice of an aim in education and in physical education?
4. What are some different conceptions of what education is?
5. What is physical education, and how does your definition fit in with some of the more widely accepted conceptions of education?
6. How do the objectives of the elementary school, the junior high school, and the senior high school differ? In what respects are they similar?
7. How does physical education contribute to the achievement of the main objectives of education which were proposed by the Commission on the Reorganization of Secondary Education?
8. What is an acceptable aim of physical education? What is the meaning of this aim?
9. What are the educational objectives of physical education? What is the meaning of each objective?
10. What are some administrative objectives of physical education?

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CHAPTER V

THE SIGNIFICANCE OF PHYSICAL EDUCATION IN THE SCHOOL PROGRAM

Desired outcomes of physical education. The objectives of physical education that are stated in the preceding chapter, if accepted and worked for by teachers of physical education in the schools, will result in a recognition of the importance and significance of this work by other educators and patrons of the schools. The use of the opportunities in physical education to direct children in educative activity, to develop and regulate the organic systems of the body, and to help prepare boys and girls for the interesting and profitable use of leisure time are objectives of the most challenging and significant kind.

The educational values of physical education. The definition of education which we have accepted in an earlier chapter states that education is a process involving the reconstruction and extension of experience. Reconstruction of anything, whether it is a house, an idea, or one's experiences, involves change. Education, then, brings about some change in the individual. From educational psychology we see that education is concerned to some extent with the modification of original tendencies. By the term "original tendencies" is meant the native, innate, or inborn ways of reacting to a given stimulus. These native ways of reacting are similar in all normal persons of all races, whether savage or civilized, because the nervous system and other organic systems of all people are very much alike. Some examples of the similarity of response among individuals include reflex actions such as the eye wink, sucking by an infant, coughing, sneezing, and vomiting; instinctive reactions such as eating, bodily activity like crawling and walking, manipulation, and vocalization; and emotional reactions such as fear, rage, and love.

The reflex actions are not of the most significance so far as physical education is concerned, but the original tendencies that are included under the headings of instinctive and emotional reactions are of particular interest to persons in physical education work. These tendencies and their modes of expression will be modified by the experiences which each individual has. Whether these modifications will result in good habits and emotional stability or in poor habits and emotional instability, with the character traits that accompany each condition,

depends to a considerable extent on the type of teaching and leadership available in the situations where these original tendencies find expression. It is in situations on the playgrounds and athletic fields, and in the gymnasium, that the instinctive and emotional reactions are most likely to be expressed; and it is these situations that offer the best opportunities for the proper modification of these tendencies which will develop desirable character traits in each individual.

The modification of original tendencies. Reflexes, instincts, emotions, and capacities are, as ordinarily thought of, rather indefinite, vague, and loosely defined modes of reaction to stimuli. There is no clear-cut line of division between reflexes, instincts, emotions, and capacities; hence some psychologists believe it is wise to avoid the use of such terms and to think of all such natural tendencies merely as a vague general urge or desire to act. However, in the minds of most people and in the opinion of many psychologists, the characteristics of these various innate ways of reacting are clearly enough differentiated to make it desirable and practicable to consider reflexes, instincts, emotions, and capacities, as separate types of original tendencies.

Teachers of physical education should be very much interested and should become thoroughly familiar with the characteristics of the original nature of children and with the ways in which their means of expression and behavior can be modified. Children are the material with which we are working, and if results of a high quality are to be secured it is essential that we know the characteristics of this material and the effects that various changes will have on it. Think, for example, of the results a cabinet maker would secure if he knew practically nothing concerning the qualities of the wood with which he was working or the effect of the treatment that he gave the wood. In all probability his completed articles would be warped, misshapen, ugly, and of little value or use. In physical education it is important in a similar way that the craftsman be a master teacher who knows thoroughly his materials and how they are affected by various influences, treatments, and experiences.

The Russian physiologist, Pavlov, and his pupils, through their experimentation with dogs, have stimulated a great deal of study and research along the lines of conditioning or modifying the original tendencies of animals, children, and adults. The experiment of Pavlov having to do with a conditioned reflex in dogs was one of the first pieces of work of this kind and has become more or less a classic in educational literature. In conducting this experiment he devised a method of measuring the flow of saliva in a dog's mouth. He then placed before the hungry dog tempting portions of food which nat-

usually "made his mouth water" by increasing the flow of saliva. Each time food was placed before the hungry dog a bell was rung. This procedure caused the animal to associate the ringing of the bell with good food, and after a period of time the ringing of the bell would, without the presence of food, cause the saliva to flow just as if the food were present. What the experimenters did in this case was to shift the response of increasing the flow of saliva from the stimulus "food" to another stimulus "ringing bell."

Conditioned response in children. Some experimental work with babies that has been done by Watson¹ shows how modes of response to a stimulus can be conditioned or modified. It has been found that a sudden loud noise caused by striking an iron bar behind an infant elicited the response of fear, such as a violent start accompanied by crying. When a white rat, a rabbit, a dog, a fur coat, a false face, and burning newspapers were presented to the child he showed no signs of fear, but instead reached for each article. It was concluded from these observations that the fear of sudden loud noises is natural, innate, or original in infants, and that any fear which might be associated with the rat, rabbit, fur coat, false face, or burning newspapers is the result of the modification or conditioning of original reactions.

In order to find how the conditioning or modification of natural tendencies take place, the child was offered a white rat and just as he touched the rat a loud noise back of him was made by striking an iron bar. He showed the characteristic signs of fear. This procedure was repeated, and after several such experiences the child would cry and crawl away from the white rat when it was presented to him without the accompanying noise. This experiment is another illustration of how natural modes of response to a certain stimulus can be transferred to another stimulus, which in this case was shifting the response "fear" from the stimulus "sudden loud noise" to the stimulus "white rat."

Other studies that have been made show that natural tendencies can be "unconditioned" after they have been modified or "conditioned." One observer reported the case of a small child who had learned to fear a rabbit, in which the fear of the rabbit was changed to a fondness for it. This change was accomplished through a series of steps in which the rabbit was presented to the child in connection with the situation of eating good food. This was done very slowly by beginning with the rabbit in a cage located across the room from the child, and gradually bringing the rabbit closer until finally the child would play on the floor with the rabbit and permit it to nibble at his fingers.

1 J. B. Watson and R. Rayner, "Conditioned Emotional Reactions," *Journal of Experimental Psychology*, III (February, 1920), 1-14.

Education with respect to emotions. Earlier in this chapter we have named reflexes, instincts, emotions, and capacities as being the four main groups of original tendencies. From the point of view of physical education the instincts and emotions offer unusual opportunities for the application of educational efforts. It is recognized that the general intellectual capacities of an individual are probably the determining factors in his ability or inability to make a success in school or in other educational situations. However, practically all of the efforts of the school are directed toward the development of intellectual capacities, and very little thought or attention is given to providing for the wholesome expression of the instincts and emotions. It is believed, therefore, that the physical education program should take advantage of its inherent opportunities to help boys and girls along these lines.

The emotions are the dynamic and driving force of most of the actions of human beings in all walks of life. Just what one means by the term "emotion" is open to some disagreement because there are almost as many different definitions as there are psychologists. Some believe that an emotion is the lack or absence of balance and coördination between ideas. Others look upon the emotions in a somewhat mystical way as being the expressions of one's heart. Another group believes that there is no scientific psychology of the emotions and that the emotional expression of each individual is determined by his particular mode of expression, at any one time. The conception of the emotions that has a wide acceptance among educators holds that emotional expression is the result of physiological changes, particularly of the secretion of certain glands in the body, and that these changes are closely associated with external stimuli. This does not mean that there are definite visceral patterns of emotional response which all people possess at birth; what it does mean is that man has certain tissues, organs, and systems which, when stimulated, are capable of complicated interactions which result in emotional responses. Patterns of emotional response such as joy, disgust, sympathy, sorrow, and elation are probably learned modes of reaction. Watson believes that love, fear, and rage are original or inborn modes of emotional response and that most of the complicated emotional reactions of adults are modifications and combinations of these three fundamental types. Ruckmick¹ believes that the emotions are the result of three factors: first, the human mind which has been developed to the point where it can perceive complete situations together with the meanings that are related and associated with the

¹ Christian A. Ruckmick, "Why We Have Emotions." *Scientific Monthly*, XXVIII (May, 1929), 252-62.

situations. Second, the likes and dislikes, the pleasantnesses and unpleasantnesses that color and affect our lives. And finally, the bodily accompaniments of experiences. These include the movement of arms and legs, facial expressions, the chills up and down the spine, dry lips, flushing face, moist palms, and the many other physical reactions that go with emotional responses. These items deepen and enrich experiences by making them intrinsically a part of a person's emotional reaction patterns.

Education of emotions in play. The importance of play and sports in the education of the emotions has been stated by Johnson in the following quotation:¹

The emotions which, in the last analysis, are the generative forces back of all behavior, are but slightly appealed to directly in the ordinary school subjects. So far as conventional instruction goes, the emotions are about as little an object of concern in education as they would be if educators had never heard of them. Where in book instruction, at least, shall we find exercise and direction of the deep-seated passions that control human conduct, love, hate, disgust, desire, fear, anger, sorrow, sympathy, elation; or for the emotional expression in situations involving rivalry, risk, sense of fairness, self-assertion, coöperation, sacrifice, loyalty? Effectual expression of these lies in motor activity and the more direct the circuit between emotion and action, the more intense is the educational experience. Theater going, for example, may stimulate the emotions. It may suggest ideal action with relation to emotions, but it cannot train the emotions. Public education is, perhaps, weakest in this matter of training emotions. Play, since it harks back to old foundations, to the old roots of both body and soul, and includes activities involving the emotional elements I have previously mentioned, is almost our only hope of adequate training of the emotions. It offers almost the only field where, with reference to the deep emotional elements of character, children and youth may become "doers of the word and not hearers only." . . . Perhaps the most fundamental problem in education, especially in a democracy like ours, is the conditioning of the emotional life of children and youth to right expression in individual experiences and in social relations.

From the standpoint of physical education the important thing in regard to the emotions is that they are definite modes of response which influence the conduct of persons, and that these modes of response in common with all other reactions of human beings are capable of being greatly modified. It is this great modifiability of the modes of response of man which make it possible for education to help shape the character and personality of individuals. The proper modification of emotional tendencies leads to emotional stability and has much to

¹ George E. Johnson, "Education of the Emotions," *Recreation*, XXV (September, 1931), 824.

do with how successfully we meet the emotional crises of life that come to all people. If the inherited emotional tendencies are modified in a faulty manner or as the result of poor influences, it is likely that varying degrees of emotional instability will result with attendant defects of character.¹

The expression and modification of instinctive tendencies. Instinctive behavior is activity that is unlearned and is engaged in for its own sake. It is the result of native or inborn motives. There is no conscious purpose in behavior of this kind and there is no anticipation or evaluation of the results. It is almost impossible to determine just what kinds of behavior are entirely unlearned in the case of man, because the learned reactions are so closely intermingled with the unlearned or original tendencies. There are, however, several groups of natural motives, urges, or drives that can be found in man in all countries and races of the world. These motives are probably not entirely instinctive but they have a primitive core or nucleus that is unlearned. Woodworth² has indicated that some of the instinctive characteristics of man are: gregariousness; sex urges; play activities such as kicking, running, jumping, and throwing; locomotion; vocalization; manipulation; exploration; laughter; fighting; self-assertion; and submission.

These instinctive urges will find some means of expression. The natural expression of many of them is inappropriate to present-day organized society and hence it is necessary to repress or to redirect them. For instance, if each person were to assault every one who annoyed him, he would probably spend a considerable part of his life in fighting. If every one from infancy followed his instinctive urges to express himself vocally, the confusion of tongues at the Tower of Babel would probably be orderly conversation by contrast. If the sex urge were not repressed or sublimated the present type of civilization and organized society could not exist. In the case of nearly all the instinctive drives it is necessary that they find expression in some form other than the way in which they would naturally and instinctively find an outlet.

It is believed by educators and psychologists that it is essential for the instinctive tendencies to find some form of wholesome expression in order that the personality of each individual will be of a normal, happy, and successful type. If the natural desires of a person are always thwarted there is danger that undesirable quirks of character will result. These are exhibited in such ways as bullying smaller

¹ Rudolf Pintner, *Educational Psychology*, p. 7. New York: Henry Holt and Company, 1929.

² Robert S. Woodworth, *Psychology*, pp. 469-473. New York: Henry Holt and Company, 1929 (revised).

children, saying unjust and untrue things about others, the use of profanity, causing a continual disturbance in school, the use of alcohol and narcotics, and day-dreams. There are many other forms of behavior that individuals resort to in the attempt to compensate for the lack of opportunity for the normal expression of the instinctive urges. In a mild form these various ways of behaving probably do not do a great deal of harm but in their extreme forms they cause criminal acts, degeneracy, and insanity.

Instinctive expression through physical education. Physical education offers many opportunities for the wholesome expression of original tendencies. The team games and outing activities are particularly valuable in their recognition of the gregarious interest of children which is especially prominent during the period of adolescence. Throwing, running, jumping, climbing, and other fundamental play activities are provided for in physical education which permits children to participate in these events in games and athletics. For instance, boys can express tendencies to throw by throwing a baseball, basketball, shot, discus, or javelin and therefore are not as likely to vent this urge by throwing rocks at people, windows, and street lights. The fighting motive causes children to put forth their best efforts in order to win the games or the races.

Physical education provides many situations in which the instinctive urges of vocalization, locomotion, manipulation, exploration, laughter, self-assertion, submission, and most of the other original drives can be sublimated or expressed. There is no school activity that offers such vital opportunities for the use of the instinctive tendencies in the development of desirable character traits and wholesome personalities.

The development of social standards and ideals. How to live successfully among other people is one of the most important things that a person must learn. Man is by nature a social or gregarious animal; in this respect he is more like the buffalo, the wolf, and the sheep than he is like the tiger or leopard. He gets most satisfaction out of living and reaches his highest development when he is conspicuously contributing something to the good of the community while at the same time the members of his social group are sustaining and stimulating him in his efforts. These characteristics of human beings have had a great influence in shaping our present society and civilization.

Most of the activities that make up the physical education program by their very nature require group participation and the whole-hearted cooperation and effort of each individual. These activities are intrinsically interesting, they provide their own motivation, they appeal to the participants as being directly worth while, and pleasure comes

from the actual participation itself, without waiting for some delayed possible satisfaction which might come upon the completion of the effort. Because of these facts boys and girls are able to learn readily many desirable social ways of behaving during the time they are participating in physical education activities. The habits, attitudes, generalizations, and ideals that are formed during these periods can be made to function in a wide variety of situations during life if the teacher takes advantage of every opportunity to point out the similarities and relationships that exist between the game situations and other situations that are likely to arise throughout life.

The importance of physical education in shaping ideals is illustrated by the number of expressions that originated in physical education situations and have become part of our language. These expressions include such phrases as "play the game," "hit the line hard," and "go through, over, or under, but never around." Ideals and attitudes are always developed in relation to some objective things or situations. "In truth, attitudes, dispositions and their kin, while capable of being distinguished and made concrete intellectual objects, are never separate existences. They are always *of, from, toward*, situations and things."¹ For example, we are not fair to fairness, we are fair to ourselves or to other people; we are not loyal to loyalty, we are loyal to our school, to our comrades, to our interests. Since physical education occupies an important and essential place in the life of children, it provides many objective and real situations in relation to which it is relatively easy to develop desirable ideals and attitudes.

Training in sportsmanship. Many of the desirable ways of behaving in relation to others are frequently spoken of collectively as sportsmanship. Some of the qualities that are included in this term are courtesy, respect, truthfulness, honesty, and fairness. Fielding H. Yost has stated that "Sportsmanship is that quality of honor that desires always to be courteous, fair, and respectful, and it is interpreted in the conduct of players, spectators, coaches, and school authorities. . . . There is no synonym for sportsmanship, but if one word were to be chosen that might most nearly express its meaning, that word would be respect. The good sportsman has respect for his opponent. He respects the rules of the game and seeks no unfair advantage. The sportsmanlike player respects the officials and abides by their decisions. Above all, the good sportsman respects the game he is playing and conducts himself at all times in such manner as never to bring criticism or discredit upon its name." Sportsmanship does not mean meekness or indifferent playing. A sportsman should put forth his

¹ John L. Childs, *Education and the Philosophy of Experimentalism*, p. 71. New York: The Century Company, 1931. Quoted by permission of the publishers.

very best efforts to win by all fair and legal means but he should be sure that his opponents have an equal opportunity to win. This point was stated well by Walter Trumbull in the following quotation from the New York *Evening Post* for January 20, 1928:

We sometimes think that the spirit of sportsmanship is not wholly understood. We have seen youngsters who thought it had something to do with "Blessed are the meek" or "Love your neighbor." That never seemed to us to be quite the idea.

A sportsman doesn't have to practice meekness. A boy who wouldn't fight for a square deal wouldn't be much of a fellow, but the sportsman is careful to see that his opponent gets the same square deal. He is not required with foolish generosity to give an advantage, but he is required never to take a questionable advantage.

Sportsmanship is simple. It is merely being gentle in strength, being courageous in weakness, keeping the rules, playing the game, being on the level with adversaries and being on the level with yourself.

Sportsmanlike ways of acting are not natural with persons. They must be taught, if it is expected that very many people will be good sportsmen. It seems to be more natural for a person to take the things he wants and do the things he wishes in a ruthless and inconsiderate manner than to show courtesy, fairness, and consideration for others. The social and moral characteristics that make up sportsmanship should be taught and worked for at all times by teachers of physical education. These ways of behaving are part of the fundamental subject matter of physical education, and a teacher who neglects to teach them is overlooking his most valuable instructional material. These modes of conduct should be taught as an integrated part of the game situations and not as something in the nature of an appendix which is hooked on to the main thing. There have been a number of efforts to devise some means of giving credit for good sportsmanship in games separate and apart from the actual scores which ordinarily determine the winner. These efforts have not proved very successful, and it is questionable whether such a plan is desirable, because it tends to set apart good conduct from the actual content of the game. In reality every effort should be made to teach boys and girls how to behave in games as part of teaching and practicing the game itself.

Sportsmanship codes. The efforts that have been made to emphasize and teach sportsmanship include the preparation of various codes of sportsmanship. One of the best known of these codes is that prepared by the Sportsmanship Brotherhood, which is an organization formed for the purpose of fostering and spreading the spirit of sports-

manship throughout the world. This organization has prepared the following "Code of Sportsmanship."

Keep the rules.
Keep faith with your comrade.
Keep your temper.
Keep yourself fit.
Keep a stout heart in defeat.
Keep your pride under in victory.
Keep a sound soul, a clean mind, and a healthy body.
PLAY THE GAME.

The following code of sportsmanship for spectators was published in the *Sportsmanship* magazine for January, 1931:

1. I will consider my athletic opponents and the officials as my guests and will treat them as such.
2. I will cheer both teams as they come on the field of play.
3. I will applaud good plays made by either team.
4. I will not applaud errors.
5. I will not "razz" the players of either team or any one officially connected with either team.
6. I will consider the officials as the proper authorities to make decisions and I will accept their decisions.
7. I will not attempt to disturb any player or official.
8. I will not stir up any unfriendly rivalry among the fans or players.
9. I will consider it my privilege and duty to encourage players and authorities to live up to the spirit of the rules of the association governing their athletic competition and to appreciate the privilege of membership.
10. I will consider it my privilege and duty to exemplify, and promote the adoption of "A Code of Sportsmanship for Fans" everywhere.

Since one objective of physical education is to develop attitudes and ideals that will result in desirable social and moral conduct in many of life's situations, it is not sufficient to develop good behavior habits in game situations only. Plans must be made to develop such patterns of conduct that our pupils will be likely to exhibit good behavior in a wide variety of situations including the playing field, the gymnasium, the classroom, the home, the recreation center, the church, and the business organization.

One method of doing this is to help the pupils analyze their principal experiences or contacts into many definite and specific activities which emphasize fair play, courtesy, respect, honesty, truthfulness, and the other qualities of sportsmanship. The boys and girls should then be helped to apply the principles of sportsmanship to these various specific activities. For instance, suppose we are trying to develop the ideal of fair play so that it will have a wide application in the life

of each child. We should first list the acts that emphasize fair play when one plays fair with his parents, his brothers and sisters, visitors in the home, servants, himself, animals, his country, and in school, on the street, and in games. After these specific acts in the many different situations have been listed we should help the children at every opportunity to see how fair play in physical education activities is the same kind of desirable behavior that should take place in the many other situations that arise every day during their lives.¹ It is probable that by the use of some such technique with the conscientious and continuous effort of the teacher, some form of attitude, ideal, or generalization can be developed which will result in the members of the class showing in their everyday conduct the effects of the instruction they have received in physical education.

One of the better statements of a sportsmanship code which recognizes the importance of making applications of sportsman-like behavior to specific situations is the one prepared by the Phillips High School of Birmingham, Alabama. This well organized and clearly stated code follows:

A GOOD SPORTSMAN

Is Courteous

On the field he does not jeer at errors; he does not cheer at the opponent's penalty; he treats them as guests, not enemies.

In school he is considerate of the faculty, of the fellow students, and of visitors.

In life he is respectful to elders and superiors; he treats the other fellow as he would be treated.

Is Modest

On the field he works for the good of the team rather than for individual honor; he will even sacrifice his own prestige for his team; he is a gracious winner.

In school he does not become conceited over his success, neither does he feel himself superior to his classmates.

In life he does not "blow" about what he is going to do; he does not boast about what he has done.

Is Generous

On the field he applauds a good play of his opponents; he gives the other fellow the benefit of the doubt.

In school he does not "knock" other schools or individuals; he appreciates another's merit.

¹ *Citizenship Through Character Development*, pp. 6-10. Boston School Committee, 1927.

In life he does not ridicule the man who is "down," but encourages him. He is not afraid to think for himself and to voice his opinions straight, forwardly, and clearly.

Is Game

On the field he plays hard; he fights though he may be already defeated; he accepts adverse decisions; he is a good loser.

In school he does his work, he keeps on working in the face of almost certain failure. He has "the vim to think straight, the pluck to act straight."

In life he does his part however hard it may be; he accepts reverses with a smile and tries again.

Is Obedient

On the field he observes the rules of the game.

In school he observes all of the regulations.

In life he respects the civic laws and the demands of the community.

Is Fair

On the field he competes in a clean, hard-fought but friendly way; he helps an injured opponent; he has no alibis.

In school he does not waste his time nor that of the faculty; he does not copy his classmates' work; he does not receive aid from any source on his examinations.

In life he sees impartially both sides of a question; he uses no underhanded methods; he is not influenced by money; he is not partial in administering justice.

Realization of the interdependence of persons. The satisfaction and expression of practically every interest, want, wish, or desire that a person has are dependent on the activities and coöperation of other persons. Everything that we do in our work, study, recreation, and home life is associated and related to other people. It is impossible for any one to live independently of the other members of society. Of course there are a large number of persons who are more or less successful in being parasites on society in that they try to profit by the benefits that come from being a member of an organized and civilized society without contributing very much to its support. This group includes the persons who evade the payment of taxes, fail to contribute to community funds or other charitable organizations, refuse to support public schools and recreation programs, and who attempt to profit through underhand and unfair manipulation of the acts of legislative bodies. Even the members of this group, however, are directly or indirectly dependent on other persons for the satisfaction of their wants.

If an individual is to be a good citizen and a valuable member of

society it is essential that he have a clear conception of the obligations each person has to the community, and that ideals and attitudes of coöperation and service be a definite part of his character. Practically all the experiences of a person from early childhood to old age help to inculcate these teachings, but it is believed by many people that physical education is particularly rich in opportunities to develop in children the knowledge and attitudes which will be conducive to desirable social behavior in regard to their team or group. Social Co-operation should be emphasized in physical education.

One situation that arose on one school playground illustrates the limitless number of opportunities that arise for teaching along these lines. A nine year old boy owned the only bat that was available for his group to use in a game of playground ball. He at first insisted that no one other than himself should use the bat. This action on his part immediately stopped the game because the other boys were not interested in having the same boy at bat all the time. The teacher in charge of the class took advantage of this occasion to explain to the boy that his bat would be of very little use to him if he used it alone all the time, and that his pleasure in the use of the bat would be increased many times if he permitted it to be used in a game with his fellows. The youngster recognized the soundness of the teacher's reasoning and a satisfactory and enjoyable game ensued. Near the end of the period the teacher called the entire class around her and pointed out to them, with several illustrations, the fact that what was true in the case of this boy and the bat would also be true in many situations during life. In this case the teacher no doubt made some contribution toward the development of desirable attitudes in her pupils.

The development of organic power. *Organisms are developed by work.* It is an accepted physiological principle that organisms are developed by activity. This statement is supported by Jordan and Ferguson¹ when they state that "During activity a muscle cell increases in size by longitudinal splitting of the myo-fibrillæ with the consequent increase in number of these myo-fibrillæ. During inactivity, the muscle decreases in size by solution of myo-fibrillæ present in each muscle cell. Therefore a highly trained muscle has a maximum number of myo-fibrillæ per muscle cell brought about by activity." Thus, when the cells of the different tissues and organs of the body go through the process of storing food, oxidizing it, and releasing energy, more organic strength and power is developed. This process is called *metabolism*.

¹ H. L. Jordan and A. C. Ferguson, *Textbook of Histology*, p. 47. New York: D. Appleton and Co., 1916. Quoted by permission of the publishers.

Metabolism is almost synonymous with life. Metabolism is the process whereby the cells of the body give off energy as the result of oxidation and store up energy through the assimilation of food obtained from the medium in which they live. The liberation of energy which causes a breaking down of the cell protoplasm is known as *katabolism*, and the building up of the cell protoplasm by the assimilation of food is known as *anabolism*. These functions, taken together, constitute metabolism.

We see therefore that physiologic life consists of a tearing down and a building up of the body cells.¹

Food is the source of energy. In animals the energy liberated by cells has been stored there as the result of the assimilation of food. The five foodstuffs that may enter in making up a food are water, salts, carbohydrates, fats, and proteins. In a sense, animals are parasites on plant life for their food, because it is only through the interaction of sunlight and the chlorophyll of green plants that simple substances such as water, carbon dioxide, the nitrates, sulphates, and phosphates can be transformed into the more complex materials which can be used for food by animals.

Matter and energy are indestructible. Fundamental principles of physics declare that neither matter nor energy can be destroyed or created. Both matter and energy can be changed from one form to another, but none of either is destroyed in the process. The food that is eaten is either stored in the cells of the body or eliminated as waste. The cells, when a demand is created, oxidize the stored food and transform it into energy and simple substances such as carbon dioxide, water, and inorganic salts that are given off as waste. These waste substances are then used again by green plants with the aid of sunlight to build up more complex materials that can be used by more animals as food.

Muscle activity stimulates the expenditure of energy. It is only through physical activity that there is created a need for the expenditure of energy beyond that required for the mere vegetative process of internal functioning. It is an unyielding law of nature that all living matter must release energy and do work or degenerate and pass into another form. It seems reasonable to believe, therefore, that the vigorous activities included in the physical education program will stimulate the metabolic processes of boys and girls and will contribute to the development of organic vigor and vitality over and above that which might naturally accrue as the result of normal maturation.

¹ William D. Zoethout, *A Textbook of Physiology* (2nd edition), p. 28. St. Louis: The C. V. Mosby Company, 1925.

If we are interested in helping boys and girls to be able to cope with the emergencies of life, to prepare themselves to carry more than their share of the world's work and responsibilities and to live on a plane higher than that of mere existence, we should be interested in providing opportunities for all to participate in vigorous big-muscle activity during the period of growth and development.

Preparation for interesting and profitable use of leisure. *All persons have more leisure.* Many people who have given serious consideration to our social, economic, and industrial problems say that in the relatively near future the typical working day will be only about four hours. Whether this prediction comes true or not, it seems certain that all classes of society will have increasingly generous amounts of leisure time. One of the most effective means of preparing individuals for the profitable and successful use of leisure is through the education of children in the schools. Physical education can make a valuable contribution toward achieving these ends.

Society is dynamic. We have a tendency to pin our faith to a fixed future. We like to think that the world will remain much the same for a long period of time. In reality we are living in a rapidly changing and dynamic society in which reconstruction is taking place all the time. If this reconstruction is to result in the development of a social order in which more good and well-being will accrue to more people, it is essential that intelligence and high ideals be applied in guiding social changes. It seems at times that the barriers to the application of intelligent guidance to changes in society are almost insurmountable, but it is a certainty we will never make any progress unless we make an effort. By attacking our social problems as seriously and scientifically as possible we can partially influence the development of the society in which we live and can look forward to the time when science will be able to direct the reconstruction of society. Physical education can serve a no more important function than to help boys and girls to live successfully in our changing social order through preparing them better to utilize their leisure time in wholesome physical recreational activities.

Children need instruction in play. To one who occasionally observes children at play it would seem that it is necessary only to provide the facilities, equipment, and a limited amount of direction and organization in order to have all children participate enthusiastically in play activities. This is true for a limited number of boys and girls whose social and motor aptitudes are well above the average. If the vast majority of youngsters are to participate satisfactorily in a variety of play activities it is necessary that they be given some instruction and guided practice in order that they can develop suf-

ficient skill to get satisfaction out of playing. Only in the schools does the opportunity exist to teach all boys and girls to do well the physical activities that can be used during leisure time. Organized recreation programs can offer many attractive recreational opportunities, but the majority of children and adults are not fitted to take the best advantage of these opportunities because they are lacking in the skills and interest necessary for satisfying participation. Tennis and golf illustrate how popular and attractive physical recreations may become; but even in the case of these favorites a relatively small number of people take part, because the majority have had no convenient opportunities to learn the games during their school days. It is only the more aggressive individuals who have sought the chance to become proficient in playing these excellent games.

Play is conducive to happiness. Many claims have been made concerning the values and importance of physical education. Some of us believe that it is an important hygienic procedure which improves the organic functioning of the body and materially raises the status of one's health. Others emphasize the fact that it develops worthwhile character traits and trains participants in desirable social behavior. It seems that one of the most important things that physical education does is to help boys and girls to play better and thereby to be happier. Happiness, like beauty, needs no excuse or justification for being. Each is acceptable for its own sake.

The responsibilities of physical education. If physical education is to live up to its responsibilities of helping boys and girls to be happy it must provide the staff, facilities, and administration to teach all children to do well the physical activities that can be used during leisure time. These provisions would make it necessary for teachers of physical education to be professionally prepared for their jobs; for all elementary school teachers to have enough preparation in physical education to enable them, with the assistance of a supervisor, to conduct the physical education activities of their pupils; for supervisors or helping teachers of physical education to be supplied in every city and county; for adequate playgrounds and other facilities to be acquired; for a daily time allotment for both an instructional and a participation period to be made in the schedule of every child; and for a scientifically constructed course of study to be furnished for the use of every teacher.

Summary. The greatest opportunities for service that are open to physical education are believed to be in (1) the provision of educational experiences for boys and girls which will modify their original tendencies for the better, (2) the organization and direction of activities that will help to develop and regulate the organic systems, and

(3) the development of skill in activities that can be used during leisure time.

There is much evidence to show how the expression of natural instinctive and emotional tendencies can be modified. The education of the emotions, which can be accomplished particularly well through physical education, may contribute to emotional stability. It is believed that there is no school activity that offers such vital opportunities as does physical education for the expression and sublimation of instinctive tendencies such as gregariousness, locomotion, play, manipulation, exploration, laughter, fighting, self-assertion, and submission. Physical education occupies a particularly significant place in the school program in the development of social standards and ideals. Group action and coöperation are emphasized; sportsmanlike behavior, which includes courtesy, respect, truthfulness, honesty, and fairness, is taught. The obligations of each individual to contribute his part to the support and maintenance of an organized and civilized society can be made clear to the pupils.

Organisms are developed by activity which stimulate the expenditure of energy. This involves the process of metabolism, which consists of the liberation of energy by the cells of the body through oxidation, and the storing of energy through the assimilation of food. The liberation of energy causes a breaking down of the cell protoplasm. This process is known as katabolism. The building up of the cell protoplasm through the assimilation of food is known as anabolism. These two functions, taken together, constitute metabolism. Physiologic life consists, therefore, of a tearing down and a building up of the body cells. Since physical education plays an important part in stimulating the metabolic processes, it occupies an important place in the development and regulation of the organic systems of the body.

Students of social, economic, and industrial problems and trends point out the fact that most people will have, from now on, more leisure time than they have ever had before. It is the responsibility of the schools, therefore, to educate people so that they can spend their increased leisure pleasantly and profitably. Physical recreations are interesting to most people. It is an opportunity and responsibility of physical education in the schools to develop on the part of every child enough skill that he or she can participate skillfully and successfully in two or three recreational physical activities.

QUESTIONS

1. What is meant by "original tendencies of man" and what are some examples of the similarity of response among individuals?

2. What is some evidence to show how original nature may be conditioned and modified?
3. What are emotions? How can physical education be used in the education of the emotions?
4. How does the expression of the instincts influence the development of character?
5. How does physical education provide for the development of desirable habits and good character traits through expression of the instincts?
6. What peculiar advantages does physical education have for the socialization of individuals?
7. What qualities of personality may possibly be developed through emphasis on sportsmanlike behavior?
8. What is the physiology of the development of organisms through work?
9. What possible relationship does the development of the organic systems of the body, which results from participation in physical education activities, have to the capacity of a person to live fully and successfully?
10. What are the opportunities and responsibilities of physical education for the preparation of persons for the profitable and pleasant use of leisure time?

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CHAPTER VI

THE HEALTH SERVICE AND SUPERVISION PROGRAM

The functions of the school health service. The functions rendered by school health services have been expanding rapidly within the past decade. In fact, many physicians believe that the expansion of these services has in some situations gone beyond the limits within which satisfactory service may be rendered. It is important that teachers, parents, and school physicians recognize clearly the functions and limitations of a school health service. Definite and important services can be rendered by means of the school health examination and other activities of the school health staff by restricting their sphere of activity to the work for which they are best suited.

It has been pointed out by Whitney¹ that much of the health work in schools is motivated by the philosophy of relief and welfare agencies. She states that the unique contribution of the school lies not in concentrating thought and energy on patching up those who have already met disaster, but in providing guidance to all children during their formative years. As an illustration of how methods and procedures are determined by underlying philosophy she says that "railroading children through a dental clinic every so often is relief work; helping the children to choose to use dental services, to use them to the best advantages, to appreciate dental service as an important factor in safeguarding health, to understand the 'why' and to cooperate with dental advice given, is educational work." This idea emphasizes the view that it is essential for all teachers to recognize the fact that public schools are maintained at public expense as educational institutions, primarily, and that the school program of physical and health education should assume responsibility only for activities that are predominantly educational.

The White House Conference on Child Health and Protection² stated that the four functions of a school health service are to help teach children the fundamentals of healthful living; to protect one child from acquiring disease from another; to provide data concerning

¹ Anne L. Whitney, "A Fundamental Difficulty in Achieving an Integrated School Health Program," *Health Section Report, 1931, World Federation of Education Associations*, pp. 162-73. New York: American Child Health Association, 1932.

² *Appraisal of the Child*, pp. 298-96. (*Growth and Development of the Child*, Part IV.) Report of the White House Conference on Child Health and Protection. New York: The Century Company, 1932.

the status of each child so that the school program may be adapted to individual needs; and to advise parents and guardians of children concerning defects which should receive the attention of the family physician.

The minimum essentials of a satisfactory health service program for schools should include a health examination of pupils, procedures to secure the correction of defects, protective measures against disease, first aid services, dental prophylaxis, and the health examination of teachers and of prospective teachers.

Health examination of pupils. It is recommended that all pupils of all grades have a complete health examination each year. This complete examination should include medical, dental, psychological, and physical examination. In schools where such an annual examination is not practicable, the inspectional part of the examination should be carried out annually by each teacher and the more complete medical and dental examinations provided as often as possible.

It is desirable to have a permanent cumulative record form on which to keep a record of the inspections and examinations of each child. In elementary schools the regular classroom teacher is usually the person to fill out the cards and make the inspectional part of the examination. In city high schools the nurse frequently does this. If there is no full-time nurse, the health teacher or the physical education teacher is probably the best person to perform this function. In small rural high schools the homeroom teachers frequently render this service in the same way as the classroom teachers in an elementary school.

After the examinations and inspections have been completed and the results placed on the record cards, it has been found to be helpful to the teachers if each is given a classroom compilation chart showing the condition of each child in her room. She should keep this chart in some convenient place and the information on it should be of considerable help to her in planning her program of health instruction and in understanding the individual differences of her pupils.

Correction of defects. If a school has the services of a nurse, one of her important functions is to visit the homes of children who have been found to have remediable defects, for the purpose of advising the parents to have the defects of their children corrected. Frequently a printed notice or an individual letter is mailed to the parents advising them of the suspected defects and asking them to take their children to their family physicians or dentists for a more thorough examination. These communications are usually mailed soon after the examination, and if no response is secured within a reasonable length of time the nurse makes her call. In situations where

there are no nurses, a second request is often mailed to the parents who have failed to provide the necessary medical and dental care for their children. In extreme cases the regular teacher or the principal may call to see the parents for the purpose of helping make the necessary adjustments, financial or otherwise, so that the children might have the advantage of medical or dental services.

The interest and continuous efforts of the teachers are the most important influences in getting the defects of school children corrected. If each teacher will keep her Classroom Compilation Chart always up to date, will emphasize in her health teaching the importance of freedom from defects, and will take a personal interest in the health of each of her pupils, her work will be more successful in obtaining corrections of physical defects than a system of mailing notices or scheme of home visits by nurses. In schools that are fortunate enough to have nurses the teachers should not leave the responsibility for the correction of defects entirely to the nurses but should supplement their work through teaching and contacts with the pupils.

All teachers should recognize the fact that it is not within the province of the school to treat diseases. The school health examinations furnish the data which help teachers to plan their program of health instruction so that it will fit the needs of their pupils; it helps to prevent the spread of contagious diseases in the schools; and furnishes parents with information concerning the physical defects of their children. Emerson states

That the treatment of disease and defect is in no way a function of the school and is never well done by the school. . . . It is a misplaced activity in a school and does no credit to the schools or good to the children. I do not know of any single creditable piece of therapeutic activity carried out under school auspices. . . . If you are dealing with posture defects there are occasions in a well-ordered school curriculum which permit a quicker and more thorough constant, hourly, daily adjustment and correction of minor deviations from the normal, whether they be feet or spines, than can be accomplished under any other kind of control at the school age. If you are considering corrective exercises under the physical education department as therapeutic, I make exception of those as suitable within the school. But when it comes to any of the other kinds of therapeutics, there are better skills, better organizations, better authority, better direction in a number of other parts of the community than in the school system, and there is no excuse for the school attempting to enter a field for which neither its personnel nor its spirit is at all competent.¹

¹ Haven Emerson, "Health Service" in *Principles and Practices in Health Education*, pp. 127-28. New York: American Child Health Association, 1931. Quoted by permission of the publishers.

There may come a time when organized society will provide for the treatment of disease, but even in that event it is doubtful that the public schools will be the best agency for carrying on the work. It is certainly true that under present conditions the school should not attempt to treat sick people. A service should be provided to protect school children from undue exposure to contagious diseases. The instructional program of the school should help the pupils to appreciate the value and importance of consulting well qualified, licensed physicians and dentists regularly in regard to their health, and of living wholesomely and hygienically.

Protective measures. The protective measures against disease provided by the health service part of the program include the exclusion from school of children who show any signs of illness, the careful examination by a physician of children who have been absent from school on account of illness before they are re-admitted to school, and the immunization of the school population against certain communicable diseases.

The responsibility for finding the children who show signs of illness rests on the classroom teacher in all schools except a few of the more progressive city schools and experimental schools which have full-time physicians or nurses in each school who inspect all the children each day. However, even in these few instances, the daily inspection by physicians or nurses is usually limited to children below the fourth grade. Good teachers usually have some routine or method of making a daily morning inspection of all the pupils in their grades which serves the purpose of checking up on any signs of illness and also can be made a valuable educational device for the establishment of health habits and other hygienic ways of living. Since the daily morning inspection should be used by the teachers primarily as an educational device, it will be discussed in more detail later under the heading of health instruction.

Children who have been absent from school on account of illness should not be readmitted until they have been examined by the school physician. If there is no school physician the best substitute is a written statement from the family physician certifying that the child in question has completely recovered and there is no danger of his communicating the disease to others. In order to have an intelligent understanding of the readmission procedure, each teacher should get from the State Board of Health in his state a copy of a chart showing the signs of different diseases, the incubation period after exposure, the duration of communicability, and the means of transmission. There are situations, usually in small communities and rural districts, where the teacher will of necessity assume the responsibility for the read-

mission of children who have been ill. It is especially important that teachers in such schools be familiar with sound readmission standards.

Smallpox, diphtheria, and typhoid fever are three diseases that can be prevented by creating specific immunities through the use of serums and vaccines. A reasonable degree of success has been achieved in the work to perfect the immunization process against scarlet fever. The authorities in charge of the school health service should make every effort to have all children immunized against these diseases and the teachers should work toward this end through their teaching and advice to their pupils. All children of all ages should be vaccinated against smallpox unless, in the opinion of the medical authorities, they have a satisfactory vaccination scar. All children of pre-school age should be immunized against diphtheria by their family physicians. All school children should be given a "Schick test" to determine whether they are immune to diphtheria. This test consists of injecting a very small dose of toxin into the skin, and if the individual responds by a reddening at the place of the injection he is said to have a "positive Schick test" and is not immune. Children who are susceptible to diphtheria should be given injections of either toxin-antitoxin or toxoid by a physician. These injections create an active immunity in approximately 90 per cent of the children treated. In about 10 or 15 per cent of cases the second Schick test, which should be made four months later, shows that additional treatments are necessary in order to secure complete immunity.

A similar technique known as the "Dick test" has been developed for use in connection with scarlet fever. If, in the opinion of the health officer, it is desirable to give all school children the Dick test to be followed by the immunization injections, the teachers should incorporate this project in their program of health instruction. The inoculation of all persons, including school children, against typhoid fever is carried out in many communities. These inoculations are effective in practically all cases and cause very little discomfort. It seems wise, therefore, for a program of school health service to include the inoculation of all school children against typhoid fever.

First aid services. Every school, from the one-teacher rural school to the largest city high school, should be ready promptly to provide elementary first aid services. In the better staffed city schools that have a full-time physician or nurse, the technique is simple and consists merely of sending the injured person to the health office for attention. In the great majority of schools which do not have a physician or nurse present in the school all the time, a workable plan is to have one man and one woman designated as the first aid teachers. All pupils who have accidents of any kind should be sent to

one of these teachers. It should be the responsibility of the first-aid teachers to be thoroughly familiar with first-aid procedures such, for example, as are described in the *Red Cross Textbook on First Aid*. The physical education teacher is frequently designated to have charge of first-aid in a school. Often this responsibility is delegated to the health teacher, the home economics teacher, the biology teacher, or some other qualified teacher. In small schools the classroom teacher must be qualified to care for first-aid cases without very much expert assistance.

Training in first-aid methods is an essential part of the professional preparation of every teacher. It is necessary for a teacher to know what to do and what not to do in cases of emergency. For instance, one teacher gave an emetic to a pupil who was suffering from severe pains in his abdomen. This was about the most unwise thing that this teacher could have done because it developed that the pupil was suffering from appendicitis and the severe vomiting might have caused the inflamed appendix to rupture. Another teacher bathed a cut on a boy's shin and then without drying it thoroughly poured iodine on the wound and immediately wrapped it securely with a gauze bandage. This resulted in a severe burn covering the entire front of the lower leg. The minimum preparation in first-aid for every teacher should approximate that required for the Red Cross certificate in first-aid.

Every school should have one or more first-aid cabinets located so as to be convenient to every teacher. These cabinets should be separate units and should be kept locked at all times when not actually being used. Each article should be plainly marked with its name and also with its use.

Dental prophylaxis. A comprehensive school health program provides for the inspection of the teeth of all school children by a dentist or dental hygienist and the necessary treatment provided in school dental clinics, dispensaries, or by the family dentists.

In schools that do not have the services of dentists or dental hygienists the teacher should make a dental inspection at the time of the annual health inspection. Dirty and decayed teeth should be considered physical defects and the health instruction should be directed toward the correction of such conditions. The prevention of such defects should also be emphasized by teaching the importance of visiting a dentist at least once every six months, the regular use of a toothbrush, and planning the diet so as to build strong teeth and stop dental decay already in progress. A number of studies and clinical observations show that good teeth are dependent to a considerable extent on the presence in the diet of calcium, phosphorus and vitamins A, C, and D; and that dental decay can be stopped,

even after it has made much headway, by including these items in the diet. The report of the American Child Health Association in its study of the *Public Health Aspects of Dental Decay in Children* (pp. 54-55) points out that "there is absolutely no relation between either stain or tartar and the development of caries. Cleaning teeth as it is done by the dental hygienist may have its own values, esthetic or educational, but the absence of stain is not associated with the absence of caries, nor is the presence of stain found to go hand in hand with caries.

"Degree of gingivitis is related in a very slight degree with uncorrected decay. Gingivitis is probably enhanced to a small degree by caries if it remains uncorrected." This report also stated that the filling of temporary teeth "has no apparent effect on the subsequent or contemporary decay of permanent teeth."

Health examination of teachers. An annual health examination for all teachers is more important than is the examination of the pupils. The health status of a teacher affects directly the physical, mental, and emotional health of his pupils and influences very definitely the effectiveness of his teaching. There are practically no school systems that require an annual health examination of teachers; a few require examinations at definite intervals; a limited number offer examinations on a voluntary basis; and a small number require examinations of teachers returning to work after absences due to illness.

Approximately one-half of the larger city school systems of the country require some kind of health examination of teachers for certification and employment.¹ The quality of these examinations range from an inspection, to prevent the spread of communicable diseases, to a complete examination and check-up on the daily routine and habits of each applicant. Carrothers² states that the applicants for teaching positions should be classified in groups on the basis of the health examination as follows:

- a. Those physically well and strong, available for almost any assignment.
- b. Those with minor defects which for the most part can be remedied by personal attention. Assignment to be carefully considered until defects are corrected.
- c. Those with defects of a more serious nature, yet remediable. Only certain types of work are to be open to members of this group.
- d. Those who are for definite reasons not fitted to engage in teaching.

¹ *The Teacher's Health*, p. 18. Monograph No. 4. New York: The Metropolitan Life Insurance Company.

² George E. Carrothers, *The Physical Efficiency of Teachers*, p. 77. New York: Teachers College, Columbia University, 1924.

A committee composed of Thomas D. Wood, J. W. Brister, and Olive Jones, after making a study of what some communities are doing to conserve the teacher's health, made some recommendations concerning what communities and school boards should do in regard to the health of teachers. In connection with the examination of teachers, this group recommended that communities and school boards:

1. Provide thorough health examinations for all teachers in service. These examinations should include a thorough survey of the teacher's physical condition, consideration of her mental health, inquiry into her hygienic daily program and instruction of the teacher regarding her health needs and how to maintain positive health. The examinations to be made by a school physician or by one approved by the school authorities.

It is essential that he should have a positive health point of view. The physician's point of view influences in large part the purposefulness and usefulness of the examination. This type of examination must inevitably give to teachers a better understanding of a healthful mode of living.

2. Require health qualifications for the employment of teachers. The acceptance of the teacher to be based on the results of a thorough examination given by the school physician or by one approved by him.

3. Employ periodic examinations for promoting the teacher's health and not as a means for disqualifying them. It is of paramount importance that school boards respect in all cases the confidential nature of these examinations.

4. Follow up examinations and stimulate the correction of defects. Provide probationary periods for the correction of defects.¹

Health examination of prospective teachers. One of the standards for the admission of a prospective teacher to a teacher-training institution should be a condition of health which would enable the individual to complete the period of preparation successfully and later to be able to stand the work and strain of teaching. Eighty-eight out of 190 schools studied by Rogers² require some kind of physical examination upon entrance, and nine require a certificate from a physician as part of the entrance requirements. Connecticut has a list of physicians, one of whom must examine every applicant for admission to a state teacher training institution. There are definite standards of physical conditions that are determined by these medical examiners as the basis for rejection, admission, or for admission on the condition that the student have the defects corrected within seven months.

The scope of health supervision. The health supervision part of the school program of health education should be concerned with the hygiene of the school plant and of the school procedures and

¹ *The Teacher's Health*, p. 23. Monograph No. 4. New York: The Metropolitan Life Insurance Company.

² James F. Rogers, *The Health of the Teacher*, School Health Studies, No. 12, U. S. Bureau of Education, p. 37. Washington, Government Printing Office, 1926.

processes. Under this heading are included the hygiene of instruction, heating and ventilating, lighting, sanitation, school housekeeping, and safety measures.

Hygiene of instruction. The hygiene of instruction has to do with the hygiene of the educational process itself and is concerned with the problem of making sure that the health of school children is not affected adversely by their school experiences. The organization of the school program is one of the things that must be carefully considered from the standpoint of the hygiene of instruction. The length of the school day, the length of the periods, and the number and length of recesses are some details of organization which determine the presence or freedom from undue strain and tension on the part of the children. Too much direction and supervision can result in the pupils feeling repressed and unhappy. The requirements set for children to accomplish should be such that they can be reasonably achieved so that the pupils will be free from worry in regard to what is expected of them.

School supplies such as erasers, chalk, pencils, and paper should be of a quality to contribute to good hygienic conditions. The printed materials should be selected carefully in regard to quality of paper, size of type, and length of line. The blackboards should be of good materials and kept in good condition. The desks should be assigned to the children so that each child will have the proper seat-height and desk-height. The seat-height can be checked according to the rule that "there must be no pressure from the forward part of the seat against the popliteal area behind the knees. Desk-height is checked by seeing that when a pupil is seated erect, with arms in writing position and elbows close to the sides, the muscles under the forearms rest firmly on the surface of the desk or as near to this position as possible, with provision for free movement of the knees under the desk."¹

Home work of the traditional kind, in which the pupils are given a task to perform or some facts to learn at home for the purpose of reporting or reciting to the teacher the next day, is not consistent with the principles of progressive educational philosophy. The assignment of home work of this kind interferes with the recreation, play, and social and cultural activities of the pupils outside of school. It should be kept at a minimum in all grades and should not be done at all below the seventh grade. There is a kind of activity which cannot be done at school that can profitably be assigned for out-of-school hours. This consists of collecting data and material for the develop-

¹ Henry Eastman Bennett, *School Posture and Seating*, p. 219. Boston: Ginn and Company, 1928.

ment of units of work that are being discussed at school; visiting points of interest such as industrial plants, business concerns, and historic sites; attending concerts and operas; leisurely reading; attending parties and social affairs; and playing vigorous games. Pursuits such as these would not ordinarily be called home-work in the old sense of that term, but since there are so many interesting things that can be done out of school it seems absurd to require children to spend these hours in the preparation of textbook assignments.

Heating and Ventilating. The amount and quality of work done by a person and the comfort with which it is done is dependent very definitely on the temperature and other conditions of the air. The studies of the New York State Commission on Ventilation show that 15 per cent less physical work was accomplished when the temperature was 75° than when it was 68°, and that 28 per cent less work was done with the temperature at 86° than at 68°. It is likewise important that the air not be too cold. In order that the health, comfort, and efficiency of school children may be maintained it is essential that school rooms be provided with air that has a temperature between 68° and 70°, moderate moisture, a variation of approximately two degrees in the temperature from time to time, and which is slightly in motion.¹

The belief is still held by many people that the question of bad air is one of chemical conditions and that it is primarily the carbon-dioxide content which makes air impure. There is also another belief prevalent which assumes that human bodies give off some kind of "body poisons" which are injurious when breathed in with the air. Notions such as these caused twenty-four states to pass laws requiring that a definite amount of air be supplied each minute for each child in a classroom. Most of the states which have such laws, require that 30 cubic feet of air per minute per pupil be supplied to school-rooms. The theory that carbon dioxide is the harmful element in expired air was discredited by Pettenkofer, a German physiologist, in 1863, but it is this theory which has caused the installation of most of the mechanical systems of ventilation in schools up to this time.

Lighting. Every school child should be assigned a seat at school in which he can work comfortably and efficiently with ample light but without glare or cross lights. In order to provide this there are several factors concerning the room and equipment that must be considered. It is true that most teachers must use the school building which is provided for them and they cannot do very much to change it, but if a teacher knows what a good lighting arrangement is he

¹ Thomas D. Wood and Ethel M. Hendriksen, *Ventilation and Health*, pp. 1-7. New York: D. Appleton and Company, 1927.

sometimes can make some adjustments which will lessen the evils of a bad situation. It is also necessary to know what a good lighting arrangement is so that a modern and well-planned building can be used to the best advantage.

Classrooms should be located so that the light comes from the north, east, or west. The study of Dressler and Southerland¹ reported that rooms facing east or west receive more sunlight with less glare and the light is more uniform, which requires less attention to control it properly. Freeman² in his study, reported that rooms which have a northern exposure receive just as good light as the ones facing east or west. The school building should be located so that trees or other buildings do not interfere with the natural light which would ordinarily reach a classroom.

The windows should be placed on one side of the room so as to eliminate cross lights and shadows and to do away with the necessity of teachers having to face the light from windows placed in the rear of the room. The bottom of the windows should be 34 to 38 inches from the floor and should extend to within six inches of the ceiling. The distance between windows should be as narrow as possible and never over twelve inches. If the seats are arranged in the usual rectangular pattern, the windows should begin at the front seats, leaving a dead space in the side wall to obviate unnecessary glare on the front blackboard. The area covered by glass in the wall should be equal to at least one-fifth of the floor area of the room. In northern latitudes this proportion should be increased. The windows should be of plain, clear glass. Studies which have been made with vitra glass in the windows of schoolrooms show that the children are not benefited particularly by the small amount of ultra-violet rays which pass through this glass.

No blackboards should be placed in spaces between windows and the blackboards should be of good material that will stay black. A good quality of slate is the best material for this purpose. The walls and ceilings of the room should be painted with a color that reflects light well; white, ivory, or cream is recommended for the ceilings and light gray, green, or buff for the walls.

Twenty-four feet should be the maximum width for a classroom because in rooms wider than this it is difficult to secure adequate light on desks which are on the side of the room opposite the windows. According to Freeman³ "every four feet from the window represents

¹ Fletcher B. Dressler and R. H. Southerland, "The Orientation of Classrooms of School Buildings," *Peabody Journal of Education*, July, 1921.

² Frank N. Freeman, "An Investigation of the Illumination Requirements of School Buildings," in *Report of Committee on School House Planning*, p. 118. Washington: National Education Association, 1925.

³ *Ibid.*, p. 118.

a reduction of 33 per cent in illumination. Thus the amount of light at each point was only two-thirds of that at a point four feet nearer the window. Or, to put it another way, to move a desk four feet from the window reduces the illumination about one-third."

Every window should be equipped with translucent shades which will stop the direct rays of the sun but will not stop all sunlight. The best arrangement of shades on windows is to have two shades on each window, the roller of both shades being at the center of the window so that one shade may be pulled upward and one downward. This arrangement will permit part of the window to be covered without shading the whole window. If there is only one shade to each window, it should be hung about six inches below the top of the window.

Standards of adequate lighting. All classrooms should be equipped with artificial lights. Electric lights are best and are readily obtainable in most communities. Kerosene and gasoline lights should be avoided in schools on account of the fire hazard involved. The intensity of the light in all parts of the room whether it is from natural or artificial sources should be a minimum of five foot-candles; an intensity of ten or more foot-candles is recommended. Freeman¹ concluded that adults could read satisfactorily in light with an intensity of three foot-candles but it is believed by most authorities on school hygiene to be desirable to have an illumination of at least five foot-candles in all parts of the room. The Code of Lighting of the Illuminating Engineering Society now requires five foot-candles as the minimum intensity for light on school desks, and recommends an intensity of ten foot-candles.

The term *foot-candle* means the illumination received at a distance of one foot from a source furnishing a light of one candlepower. A 100-watt incandescent bulb produces light of approximately one hundred candlepower and will give an illumination of about four foot-candles on a surface five feet away and one foot-candle on a surface ten feet away, since the illumination of the surface is inversely proportional to the square of its distance from the source of light.

The ordinary classroom should be equipped with six electric lights hung in two rows. The lights should be hung high enough to take advantage of reflected light from the ceiling and the greater diffusion thus obtained, and should be completely enclosed in a globe of translucent glass. Each row of lights should be controlled by separate switches so that the lights on the side of the room opposite the windows can be turned on independently of the ones near the windows. The lamps used in the globes should be large enough to insure an illumina-

¹ *Ibid.*, p. 108.

tion of 10 foot-candles in all parts of the room at night. This will probably require 300-watt lamps in most instances.

All children should be seated so that the light from the windows will come from their left or from over their left shoulders. Every precaution should be taken to prevent children in school from facing a direct light, such as a window in the front of the room, or a reflected light from a blackboard or other surface. The efforts of some teachers to make the schoolroom situation informal by seating their pupils at tables, which causes half the pupils to face the windows, may cause much injury to the eyes of the pupils. Winifred Hathaway,¹ associate director of the National Society for the Prevention of Blindness, states that the common method of arranging seats in rows parallel to the windows causes a glare from the front windows to fall on many of the children in the back of the room. She points out further that light received on the horizontal causes highlights and shadows on material used on desks. To avoid these objectionable results some schools arrange the desks at an angle slightly away from the windows so that the light will come over the left shoulders of the pupils.

Sanitation. The provision of an adequate supply of pure water for drinking and hand-washing is the most important objective of teachers in their efforts to secure and maintain sanitary conditions at the schools. The first step in securing pure water is to make sure that the water is wholesome at its source. In cities this matter is looked after by the water department of the city government and by the board of health, but in rural districts and small towns where water is obtained from springs and wells it is the responsibility of the teacher to determine whether the water used at the school is safe. The way to do this is to protect the water from outside contamination and then send a sample of the water to the county or state board of health to be tested. Concrete caps should be placed on wells, and both springs and wells should be protected from surface drainage by banking dirt around them and digging trenches to carry off the rain water that would be likely to drain into them. Springs should be boxed in so as to protect them from dogs and other animals.

It is essential that the school surroundings be studied to make sure that there is no drainage into the water supply from toilets, cess pools, pig pens, barnyards, highways, or other possible sources of pollution. In order to be sure that the water will not be polluted by sub-surface drainage, any concentrated source of pollution (as stables or privies) should be located 200 to 500 yards from the well or spring. In cases where pit privies and septic tanks are used, care

¹ Winifred Hathaway, "The Well Lighted Schoolhouse—A Cooperative Effort," *The Nation's Schools*, VI (July, 1930), pp. 55-58.

should be taken that the tank or pit is free from cracks, protected from surface drainage, and that at least ten feet of soil intervenes between the bottom of the pit and the ground water.

After the source of water has been made safe the next matter of importance is to provide hygienic drinking facilities. In cities and other places that have an adequate supply of pure running water the problem can be solved by installing at least one bubbling drinking fountain for each 75 or 100 pupils in convenient places in the corridors. Drinking fountains should never be located in toilet rooms. The type of fixture should be such that the water comes out at an angle so that it is impossible for the drinkers to place their lips to the outlet. The drinking fountains should be kept clean and the pupils instructed in how to use them.

Common drinking cups should not be permitted under any conditions. The plan of having each child keep an individual glass or cup at school has not been satisfactory because of the difficulty of keeping these articles clean. In schools where it is not practicable to have any kind of drinking fountains the most satisfactory plan is to have covered water containers with hydrants on them and to use paper drinking cups. If it is not possible to buy drinking cups for every one to use, the pupils should be taught how to make paper drinking cups out of sheets of paper.

Handwashing at school. Washing the hands with soap and warm water after going to the toilet and before eating is a most important hygienic practice. Studies that have been made in schools and in public comfort stations show that many more people wash their hands after going to the toilet if warm water, soap, and paper towels are provided conveniently than if only cold running water is available. It is essential to a sound program of health supervision that adequate handwashing facilities and soap and paper towels be provided. No standards as to the number of lavatories needed in schools have been scientifically determined but there have been standards proposed as the result of observation and experience. Strayer and Engelhardt, in their *Standards for Elementary School Buildings*, recommend one lavatory for every fifty pupils; Wood and Rowell¹ specify one washbowl for every fifteen or twenty children; the School Health Appraisal Form issued by the Massachusetts Institute of Technology² specifies one lavatory for each classroom or for every 40 children.

A regular routine for all pupils to wash their hands before eating

¹ Thomas D. Wood and Hugh Grant Rowell, *Health Supervision and Medical Inspection of Schools*, p. 475. Philadelphia: W. B. Saunders Company, 1927.

² School Health Appraisal Form, Department of Biology and Public Health, Massachusetts Institute of Technology. Cambridge, Massachusetts: Massachusetts Institute of Technology (mimeographed).

their lunches should be carried out in all schools. In a few situations there are enough lavatories so that all pupils can wash their hands without there being too much crowding and confusion in the toilet rooms. In most schools it is desirable to dismiss different grades at different times for lunch so as to reduce the peak load on the washing facilities. One school has arranged a very satisfactory plan by installing six lavatories with soap and towels in the passageway leading to the cafeteria. As the pupils pass through this corridor they wash their hands. By the use of the six washbowls at the same time, children are able to wash their hands as rapidly as the pupils in front can select their food, so that the line continues its progress at a satisfactory rate.

A plan for washing hands in rural schools that do not have running water was worked out by Miss Elma Rood during the Mansfield Child Health Demonstration and has been used in a large number of situations since. The technique has been described as follows in an outline for teaching cleanliness:

The equipment consists of a pail to serve as a "sink," a gallon measure to hold the water, and an oil can to hold liquid soap (made by boiling a teaspoonful of powdered soap into a quart of water for five minutes).

Three children are appointed to have charge of the handwashing; the first has the oil can, the second has the gallon measure and the pail, and the third holds the roll of towels. As the other children file by they hold their hands cup shape to get some soap, then hold them over the pail for a little water, get the soap suds washed off into the pail and finally pass on to get a paper towel. Twenty pupils wash their hands this way in less than five minutes.¹

In a study of handwashing that was made in Newton, Massachusetts, during which over 10,000 handwashings were timed with a stop watch, "it was found that handwashing time for units of 100 children ranged from five to fifteen minutes, this wide variation depending upon the type of equipment used, the location of water, soap, and drying equipment in relation to each other, and whether or not supervision was provided."

School housekeeping. The efficiency, health, and happiness of children are affected by the cleanliness of the school. Since the condition of the buildings and grounds is the only means that many people have of judging a school, it is essential, from the standpoint of interpreting the work of the school to the public, as well as for the good of the children, that the housekeeping of schools be the best.

¹ C. Margaret Munson, *Outline for Cleanliness Teaching*, Section I. New York: The Cleanliness Institute. 1931.

In order that the school may be kept clean, it is necessary that implements for good housekeeping be provided. These include floor brushes, mops, pails, dusting cloths, ladders, carpenter's tools, vacuum cleaners, electric scrubbing machines, vacuum eraser cleaners, straps and platform for washing windows, and such tools for the care of the yard as a lawn mower, hose and nozzles, hoes, rakes, and tools for trimming hedges. To lessen the amount of mud and dirt carried into the school on the feet of children there should be provided foot scrapers and door mats at all entrances.

All floors should be cleaned with a vacuum or by sweeping at least once daily. The furniture should be arranged so that the brush or vacuum can be used lengthwise with the floor boards. Classrooms should be cleaned after school hours; corridors, stairways, and special rooms may be cleaned during school hours; toilets should be cleaned after every peak load of use, which is usually four times a day. The urinals, toilet bowls, and seats should be cleaned at least once each day with a strong cleanser.

The school playgrounds should be well drained and the surface should be of a kind of soil that will not get muddy easily. Walks should lead to all entrances of the school. The walks will help to keep the lawns in good condition and will reduce the amount of mud tracked into the school.

Good implements for housekeeping, good janitor service, and a well planned building are all necessary if a school is to be kept clean with the minimum effort and cost. The most important thing, however, in keeping a school clean is the interest and *esprit de corps* of the teachers and pupils. If there is a good school spirit and a desire to make the school as good as possible in all respects, the housekeeping problem will be solved to a considerable extent. If such a spirit is lacking it will be difficult to keep a school clean, regardless of the modernness of the building, the expertness of the janitor service, and the completeness of the equipment. Every teacher should assume the responsibility of building up among his pupils a school spirit and an appreciation of the values of a clean school. In this way boys and girls will receive valuable lessons in citizenship and can be taught to cooperate in making the school a desirable and wholesome place.

Safety measures. Accidents are responsible for more deaths among children of school age than any other cause. Measurable results in reducing accidents can be achieved by carrying on a program of safety education in all grades. Studies that have been made show that safety education is an effective means of reducing the number of deaths from accidents.

During the seven years since 1922, the year when work in safety education was actively begun, there was a 32 per cent increase in accidental fatalities to adults and an increase of only 1/16 of one per cent in accidental fatalities to children. If accidents to children had increased during this period at the same rate as accidents to adults there would be each year 6,000 more deaths of children than do now occur. The figures in some localities such as New York City show still greater differences between the records for adults and for children. Automobile fatalities in a country-wide city population of 38 million for the years 1927-1929 show a 25 per cent increase for adults, a 7 per cent increase for children of pre-school age and a 10 per cent *decrease* for children of school age.¹

The National Education Association has published the following outline of a school program of safety:

A SAFE SAFETY PROGRAM FOR OUR SCHOOLS

1. Safety patrols to protect pupils before and after school and at recess at the traffic intersections near the school.
2. Corridor and playground patrols to direct traffic and prevent disorder and accidents within the school building.
3. Fire drills to facilitate a safe exit from the building in case of disaster.
4. First aid provisions in each building to take care of minor injuries.
5. Coöperation with the police and fire departments in Cleanup Week, Fire Prevention Week, and similar programs directed toward safety.
6. Safe buildings: well lighted, heated, and ventilated, with protected stairways, doors opening outward, adequate fire escapes, and fire protection.
7. Adequate play spaces, either inside or outside the building.
8. Supervision of athletics and physical education activities by trained physical directors.
9. Safety teaching in all the grades of the elementary school either as a separate subject or as a part of the health, civics, language, or science programs.
10. Health and safety extracurriculum activities in the form of clubs, assemblies, and homeroom programs.

Summary. The functions of a school health service should be primarily educational. The school should not assume the responsibility for treating sick children. The objectives of the school health service should be (1) to help teach children the fundamentals of healthful living, (2) to protect one child from acquiring disease from another, (3) to provide data concerning the status of each child so that the school program may be adapted to individual needs, and (4) to advise

¹ *A Guide-Book for Safety Education*, p. 11. New York: National Bureau of Casualty and Surety Underwriters, 1931.

parents and guardians of children concerning defects which should receive the attention of the family physician.

The activities which should be carried on in an effort to achieve these objectives should include the health examination of all pupils, teachers, prospective teachers, and all school employees; an organized effort to secure the correction of defects; protective measures against the spread of diseases; first aid services at each school; and dental inspections.

The school program for each child should be carried on in such a way that his school experience will be healthful. This necessitates the hygienic arrangement of the daily schedule, the selection of healthful school equipment and supplies; and the wise choice of assignments for home work. The heating and ventilation of the school buildings should be carefully supervised, and the lighting of all rooms should be such that each child may work at school comfortably and efficiently with ample light but without glare or cross lights.

The sanitation of the school environment is of paramount importance. The most essential objective of school sanitation is to provide an adequate supply of pure water for drinking and hand-washing. Teachers who are employed in rural and small town schools have a particular responsibility in regard to this matter because they do not have the advantage of the services ordinarily rendered by city boards of health and city water departments.

Good school housekeeping is necessary from the standpoint of the efficiency, health, and happiness of children and also in regard to the impression that the appearance of buildings make with school patrons and taxpayers. Adequate tools and supplies are necessary in order to keep a school building properly cleaned. It is also necessary that definite standards for janitorial work be set up and that a routine be established for carrying on this work.

Accidents result in more deaths among children of school age than any other cause. It has been proved that the number of accidents can be reduced by carrying on a program of safety education in all grades. The important items in a school program of safety education have been included in an outline of a safety program which is distributed by the National Education Association.

QUESTIONS

1. How does the educational point of view differ from the philosophy of relief and welfare agencies in regard to health service in public schools?
2. What are the functions of a school health service?
3. What are the responsibilities of a teacher in regard to the health examination of pupils?

4. What procedures can be used effectively for securing the correction of defects in children?
5. On what principle can a school justify its efforts to secure the immunization of the school population against certain communicable diseases?
6. What items should be included in the school program of protective measures against disease?
7. What provision in the way of facilities and professionally prepared personnel should be provided by schools of different sizes for first aid services?
8. Why should teachers and all other school employees have a complete health examination at least once each year?
9. What items are usually included in health supervision?
10. What standards should be observed in the assignment of home work to pupils?
11. What are the important things that should be considered in connection with the heating and ventilation of a school room?
12. What quantity and quality of light should fall on the desk of each child in school?
13. What precautions should teachers take to insure a supply of pure water for their schools?
14. Why is good housekeeping in schools important? What standards of housekeeping should be used in the care of school buildings?
15. What activities should be included in a safety program for schools?

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CHAPTER VII

THE HEALTH INSTRUCTION PROGRAM

The importance of health instruction. A study of the data which show the mortality and morbidity rates for all age groups in this country reveals the fact that many deaths and much sickness could be avoided if the majority of people knew and applied in their daily living the available scientific facts of personal and community hygiene.

The studies made by the United States Public Health Service showed that the average American school child is absent from school on account of illness thirteen days each year. The six diseases which caused most of the illness, listed in the order of importance, were colds, headaches, digestive disorders, tonsillitis and sore throat, toothache and diseases of teeth, gripe and influenza.¹ Table I provides a summary of other studies of disabling diseases among adults and children. A study of these data shows that the incidence of many of these diseases could be greatly reduced by providing the masses of the people with the health knowledge and attitudes which would enable them to live more hygienically both individually and socially.

TABLE I

THE MOST SERIOUS DISABLING DISEASES, LISTED IN ORDER OF THEIR PREVALENCE OR FREQUENCY OR ACCORDING TO DAYS ABSENT FROM WORK OR SCHOOL ON THE PART OF PERSONS AFFECTED *

Study of 687,938 persons by Metropolitan Life Insurance Company in order of prevalence of diseases.	Study of 18,000 factory workers by U.S.P.H.S. in order of frequency of diseases.	Study of 1,282 office workers by U. S. P. H. S. according to number of 8-hour days lost.	Study of 6,130 school children by U.S.P.H.S. according to number of days absent.	Report of New York State Department of Health. Reportable diseases for 1921 according to frequency.
1. Rheumatism	Colds	Influenza	Colds	Measles
2. Influenza	Influenza	Fatigue	Measles	Diphtheria
3. Pneumonia	Tonsillitis	Tuberculosis	Influenza	Scarlet fever
4. Tuberculosis	Headache	Colds	Mumps	Pneumonia
5. Organic heart disease	Bronchitis	Tonsillitis	Scarlet fever	Syphilis
6. Colds	Constipation	Dysmenorrhea	Whooping cough	Tuberculosis
7. Measles	Rheumatism	Indigestion	Chicken pox	Chicken pox
8. Appendicitis	Boils	Scarlet fever	Tonsillitis	Whooping cough
9. Whooping cough	Diarrhea enteritis	Headache	Toothache	Mumps
10. Tonsillitis	Myalgia	Whooping cough	Pneumonia	Gonorrhea

* From H. H. Moore, *Public Health in the United States*, Table 9. Quoted by permission of Harper Bros., Publishers.

1 United States *Public Health Reports*, XL (February 27, 1925), 401-2.

The most effective way of providing the necessary health knowledge, habits, and attitudes for the entire population is through a program of health instruction in the schools. In this way practically all of the children of each generation have the advantage of health instruction.

Health instruction in the elementary school. The purpose of a program of health instruction in the elementary grades is to develop knowledge, habits, and attitudes which will help the children of these grades to be healthy and happy. In developing a program of health instruction some of the factors that must be considered are the needs of the children as revealed by a medical examination, knowledge tests, and a study of their home life; the expressed interests of the children; the opinions of experts in health education as to the usual or average health needs of children in these grades; and a study of many other programs of health instruction in order to compare the materials and methods that have been used in other places.

The first responsibility of health teachers is to make sure their pupils have command of the necessary and fundamental health knowledge. It is true that practice is of more value and is more important than knowledge, but the importance of knowledge in helping one to reason and form judgments and make decisions should never be ignored. By the time a pupil completes the sixth grade he should be in possession of knowledge along the following lines:

1. Information as to the structure and function of the body that will enable him to take proper care of the body. This is especially true of the eyes, ears, nose, mouth, throat, skin, hair, and nails.

2. The rules of safety.

3. The rules and methods of First Aid or what to do until the doctor comes.

4. How disease is spread and how to avoid disease.

5. What the neighborhood, city, county, state, and nation are doing to prevent disease.

6. How the pupils as citizens may cooperate with social and political groups to promote hygiene and sanitation.

7. The nature and value of foods and drinks.

8. The nature of alcohol and tobacco, their relation to health, and the economic and social results of their use.

9. The names and achievements of the leading heroes of preventive medicine.

The second responsibility of health teachers is to help their pupils form habits of healthful living so that the simple rules of health will be observed and worked out in actual practice. It may be somewhat satisfying to one to have a knowledge of hygiene but if this knowledge

is not used in the development of habits it will not be of the most use to the individual in his daily life. Knowledge of health and how to maintain it is necessary and desirable, but what really counts is how one behaves or acts in regard to the laws of health.

Some of the health habits every pupil should have by the end of the sixth grade are:

1. Eating slowly and moderately of nourishing and wholesome food.
2. Bathing the whole body at least twice a week and putting on clean underwear.
3. Washing the hands whenever they are dirty, and always after going to the toilet and before eating.
4. Brushing the teeth thoroughly every morning and every night.
5. Keeping the finger nails, hair, and skin clean and in good condition.
6. Protecting and caring for the eyes, ears, nose, and throat.
7. Regular elimination.
8. Sleeping many hours with windows open.
9. Exercising regularly in the open air.
10. Protecting food from flies and dust.
11. Erect carriage and good posture.
12. Regulating accurately the temperature of the room.
13. Removing wet clothing and shoes.
14. Taking the proper care of sores, cuts, burns and bruises.
15. Using individual drinking cups and towels.

The third responsibility of health teachers is to lead their pupils in the development of attitudes that will be conducive to healthful behavior. It is not possible or practicable to develop habits to fit every situation that might arise, but it is desirable to develop attitudes that might apply in a wide variety of situations.

Some of the attitudes that every pupil should have at the end of the sixth grade are (1) insistence on cleanliness, (2) cautiousness with regard to personal safety, (3) desiring to be of service to the community, and (4) willingness to be coöperative and helpful.

In making the effort to provide pupils with the desired knowledge, habits, and attitudes the method most to be desired would be for the instruction in health to be so closely integrated with all the activities of the school that it would be unnecessary to have any separate period in the school program for instruction in health. However, since the emphasis on health education in the schools is comparatively new, it is recommended that there be a minimum of three periods each week of thirty minutes each for health instruction.

Health instruction in platoon schools. In platoon schools a workable plan for teaching health is for the physical education teachers to be assigned the responsibility for the direct instruction in health. Every teacher in a platoon school, however, should take advantage of suitable opportunities to emphasize the importance of healthful behavior just as is expected of every teacher in the traditional type of school. When general science is taught in a platoon school, the teachers of this subject have unusual opportunities to teach some of the fundamental science subject matter of health education. This includes such material as the chemistry of nutrition, the basic facts of ventilation, the effects of air and sunlight, the effects of sterilization and disinfection, and the means of securing pure water and milk.

Social studies and physical education also present many natural opportunities for teaching health.

The systematic-incidental method of teaching hygiene. Every opportunity should be used to teach the health subject matter in relation to the situations in which it applies. For example, the occasion of the monthly weighing of children might be paralleled in the classroom with instruction on how the body grows and what kinds of food are required to maintain normal growth. The visits of the school physician, nurse, or dentist might lead to a discussion of the importance of a complete medical examination annually and the necessity of caring for the teeth. The exhibition of endurance, breathlessness, and skill during play offer occasion for discussions of the heart and circulatory system. An extended table¹ of experiences, topics, and references offers suggestions which make it possible for teachers conveniently and quickly to assemble material for teaching health in connection with a number of natural and true-to-life situations in which the pupils have had experiences. There is a danger in attempting to teach health subject matter in connection with the situations which naturally arise at school. Some teachers may drag into the discussion a great deal of subject matter which is extraneous. Such procedure may bore the pupils and is ridiculous from the standpoint of good educational method. In attempting to organize subject matter around the every-day problems which arise a teacher should be certain that the material has a real bearing on the problems concerned.

A plan for teaching health to all pupils in high school. How to arrange the high school program of health instruction so that every pupil will receive the essential instruction along this line is one of the most difficult problems that arise in connection with a school program in physical and health education. If the science courses are

¹ Herbert R. Stols, *Manual in Health Supervision and Instruction for the Elementary Schools of the State of California*, pp. 81-84. Sacramento: The State Department of Education, 1924.

organized so as to include the health instruction many of the pupils who do not take the work in science will fail to get the health instruction. If all pupils are required to take a special health course the classes will be made up of some students who may have learned a great deal about health matters in science, home economics, and other courses; and of others who have not had such courses.

A plan which offers a satisfactory method of meeting this problem has been described by Laton,¹ who states that in the University High School of the University of California a course in civics is required of all high school students and that physical education is required for all students in all years of high school. An elective course in physiology and public health is offered. In the case of students who elect the course in physiology and public health and elect other courses such as biology that provide some instruction in health, it is assumed that they are reasonably well informed concerning health matters and, therefore, are not required to take a special course in health. All students who have not elected the course in physiology and public health and other courses containing some health content are required to supplement the instruction they have received in civics and physical education by taking a special course in health.

Methods of arranging health subject matter. The common method of arranging the subject matter of health education is an objectionable method. This practice is for one or more adults to decide what facts concerning health should be taught to children and then proceed to arrange these facts in a logical order for teaching. Such an arrangement would begin with the cell as the unit of structure and then proceed to a discussion of the tissues, organs, and the complete organism. In some arrangements of this kind an effort is made to describe the function of each part along with its structure; in other discussions the description of structure is completed and then the physiology of the different tissues, organs, and systems is given. Very frequently when subject matter is arranged in this way, the emphasis is placed on relatively unimportant facts and the material is omitted which is essential to an understanding of the health problems that children meet in their daily lives. An illustration of radically misplaced emphasis is the nearly obsolete practice of requiring children to memorize the names and locations of all the bones of the body.

Another way of arranging health subject matter is to organize it around the specific interests and needs of the pupils. Frequently these interests are stimulated by other subjects which are being studied in school. When subject matter is organized in this way it is often

¹ Anita D. Laton, "Health Instruction in the Secondary School," p. 184, in *Principles and Practices in Health Education*. New York: American Child Health Association, 1931.

spoken of as a project or a problem. The following is an outline of a health project for the second grade which can be correlated well with geography and history.

CHILD HEALTH IN OTHER LANDS¹

A. Eskimo Children

1. The home of the Eskimo

- a. ventilation
- b. light
- c. room to move about and play
- d. number of rooms
- e. temperature conditions

2. Daily life of the Eskimo

- a. hours of sleep
- b. habits of sleep—night clothing, etc.
- c. habits of cleanliness
 - (1) not easy to secure water for bathing purposes—has to melt ice or snow
 - (2) rubs grease on face and body to retain heat—note appearance and odor
 - (3) does not need door mat—no mud in the winter
- d. food habits
 - (1) eat much more than children in this country—necessary to keep warm
 - (2) meat, blubber, eggs (birds'), milk (reindeers'), plants, berries, and fish
 - (3) usually has good teeth, but wears them down to the gums in old age
- e. queer customs
 - (1) used to rub noses for greeting
 - (2) mothers have been known to use their tongues to wash baby's face
- f. accidents of Eskimo children
 - (1) knife cuts
 - (2) dog bites
 - (3) frost bites
 - (4) snow blindness
- g. sports of Eskimo children
 - coasting, wrestling, rolling down hill, playing with bow and arrow
- h. physical development—how compare with our children in size, build, general health, length of life
- i. class may write suggestions of different things the Eskimos may do to have better health

¹ Health Education—Suggestive Course of Study for Second and Third Grades, pp. 11-12. Tulsa, Oklahoma: Board of Education. (Mimeographed.)

B. Dutch children

(Might be organized into a Dutch Health Club, built around cleanliness and industry.)

1. Location of homes—near the ocean, fresh air, sunshine, out-of-door life.
2. Furnishings of home—simple. Small bedrooms—not good sleeping places.
3. Care of homes—kept very clean—whole family helps in cleanliness—shoes removed when in house.
4. Food and how they get it. Eggs, vegetables, milk.
5. Clothing worn.
6. Cleanliness—bathing—care of teeth—handkerchiefs, etc.
7. Sleep.
8. Games and sports—skating, boating, fishing.
9. Home work—care of cattle, tending geese and other fowl, gardening, helping on boats, helping in dairies.
10. Safety precautions Dutch children must take—not to fall off boats or to go through the ice. Must guard the dikes.
11. Habits of service we might learn from Dutch children—kindness, honesty, courage, self-reliance, etc.
12. Good health habits Dutch children might teach us.
13. Some suggestions we might make to Dutch children for better health habits.

The same educational philosophy and methods of teaching which lead to the organization of subject matter as projects has also caused some health educators to organize the instructional content into units of subject matter. These units are based on the needs of the pupils and include activities within the range of the pupils' experiences.

Three units of health subject matter are given below to illustrate this type of organization at different grade levels.

SECOND GRADE

UNIT I—CLEANLINESS¹

OBJECTIVES: KNOWLEDGE, ATTITUDES,
HABITS

Knowledge

Cleanliness helps us to keep well.

A daily bath is desirable; a bath at least twice a week essential for health and comfort.

Hands should be washed before meals, after use of toilet, and whenever they are soiled.

Each person should have individual towels.

Mouth and nose should be covered when we cough or sneeze.

Fingers, pencils, or strange objects should not be put into the mouth, nose, or ears.

Children should always come to school provided with clean handkerchiefs and should use them in the proper way.

¹ *Ibid.*, p. 4.

Attitudes

Enjoys feeling of cleanliness, both of body and of clothing.
 Begins to feel responsibility for helping to keep home and school neat and clean.
 Takes pleasure in clean books, in cleansing bath, etc.

Habits

Comes to school with clean hands, face, neck, and ears.
 Washes hands before eating, after toilet, and whenever soiled.
 Takes general bath at least twice a week.
 Keeps fingernails clean and in good condition.
 Keeps own towel and washcloth, hairbrush and comb.
 Keeps hands away from face.
 Keeps foreign articles, pencils and fingers away from nose, mouth, and ears.
 Comes to school with clean handkerchief.
 Covers nose and mouth when coughing or sneezing.
 Blows nose lightly, keeping at least one nostril thoroughly open.
 Keeps handkerchief in pocket, taking it out only when needed.

ACTIVITIES AND PROCEDURES

"The Child Who Forgot to Wash His Face," from *Stories for Sunday Telling*. "The Morning Circus and Henrietta's Handkerchief," from *Mary Gay Stories*. "Dust under the Rug," page 45, and "Billy Boy," page 44 from *Health Training in Schools*.

Practice in washing hands before meals, after toilet, and whenever soiled.

Certain responsibilities given to children for keeping their own desks and the schoolroom and surroundings clean.

Demonstrations of simple ways to care for nails.

Demonstrations of ways of using handkerchiefs correctly.

Care taken that handkerchiefs are not used to dust desks, or to drop on floor or hand from one to another in playing games.

Individual attention will have to be given to the child who bites his nails.

Places provided for child to keep his belongings at school and at home.

GRADE 7B¹

Integrating Idea: How the health of each individual may be maintained at the highest efficiency through proper and intelligent care.

Job Unit I—*Cleanliness in Its Relation to Physical and Mental Health*

SPECIFIC OBJECTIVES

1. *Attitudes:*

- a. To develop a personal pride in bodily cleanliness
- b. To aid pupils to appreciate personal cleanliness in relation to health and beauty

¹ V. S. Blanchard and Lauretine B. Collins, *Course of Study in Health Instruction for Intermediate School Grades*, pp. 27-29. Detroit: Board of Education, 1930.

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- c. To develop method in practice of and serious attitude toward body cleanliness

2. *Habits:*

- a. To promote frequent and regular habits of bathing
- b. To promote the habit of washing before meals
- c. To promote the habit of frequent cleaning of nails, teeth, and hair
- d. To promote the wearing of clean underwear and footwear
- e. To promote habit of leaving bathroom and lavatory neat and clean after using

3. *Knowledge:*

- a. To aid the pupil to acquire proper knowledge of time, frequency, and kinds of baths
- b. To aid pupil to acquire proper knowledge of care of body after bathing
- c. To aid pupil in proper use of school bathing facilities
- d. To aid the pupil to know what cleanliness really is (such as—the difference between living dirt and non-living soil, i.e., disease germs, dust, etc.)
- e. To aid the pupil to know why cleanliness helps to prevent diseases
- f. To aid pupil to know the principles of personal sanitation
- g. To aid the pupil to know the joy of being clean—compare feeling before and after bath.

CORRELATION WITH OTHER SUBJECTS IN THE CURRICULUM

1. Home economics
2. Arithmetic
3. General Science
4. Art
5. Social Science

ACTIVITIES AND PROBLEMS

1. Make a survey of the school bathing equipment and discuss its use and abuse.
2. Make a study and report on the proper time for hot and cold baths.
3. Plan a complete day in regard to personal cleanliness—from morning until bedtime.
4. Study and report on climatic effect upon personal cleanliness—summer and winter.
5. Bath projects—soaps—water (soft and hard, warm, cold, and tepid) tub, shower, and sponge baths, skin brushes.
6. Discuss relation of personal cleanliness in social and business contact.
7. School projects in inspecting clothing and toilet facilities.
8. Make a survey of all hand-washing facilities in school.
9. Discuss home and community aspects of cleanliness.

HIGH SCHOOL ¹*Teaching Unit I—Food and Nutrition*

A. Objectives

1. To know the principles of food selection.
2. To know the facts of digestion.
3. To be responsible for applying scientific knowledge to diet.
4. To be responsible for helping to protect community food supplies.
5. To appreciate the part that nutrition plays in well-being and personal appearance.

B. Activities

1. Why does the body need food and water?
 - a. Compare this year's height and weight record with that of last year.
 - b. Keep individual monthly growth record.
 - c. Keep growth record of small child for at least three months.
2. What different foods does the body need?
 - a. Keep personal record of food eaten for two days. Tabulate, showing number of students having at least one pint of milk, and fruit and vegetables daily.
 - b. Set up standards for a desirable day's diet for high school student.
 - c. Compare personal records with these standards.
 - d. Organize and promote a plan for good selection of foods in school lunch room.
 - e. Plan and carry on an animal feeding experiment showing value of milk and vegetables as growth foods.
 - f. Make a list of the principal foods which will supply the necessary minerals and vitamins for building teeth.
3. What are some of the major signs which usually indicate good nutrition?
 - a. List those signs of good nutrition observed in the child whose growth record was kept as suggested under Activity 1.
 - b. Make a personal plan for improving one or more signs of good nutrition and try the plan.
 - c. On the basis of the presence or absence of dental decay which nutritionists generally believe is one standard for judging a person's past and present nutrition, evaluate the nutritional condition of the class members.
4. What are the sources of foods?
5. How should diet be varied for different ages and occupations?
 - a. Plan a day's menu for a family of two adults and two children.

¹ A Tentative Course of Study in Health Education for Graded Schools in Michigan, pp. 56-58. Bulletin No. 62. Lansing, Michigan: Department of Public Instruction, 1930.

- Sex education.** Sex education is a phase of health education in which there is still considerable difference of opinion as to desirable subject matter for various age levels and methods of instruction. In the lower grades it is believed to be the best plan to explain matters concerning sex as they arise in the wholesome everyday experiences of the children. If a definite course of instruction were provided the

emphasis probably would be on what the teacher said and did rather than on the experiences of the pupils. The normal associations of a child in a home; the natural recognition of sex differences by little children; observing white rats, dogs, and other animals with their young, and allusions to relationships between the sexes in newspapers and moving pictures are examples of situations that contain opportunities for giving children information which will help them better to understand their experiences, and at the same time provide sex instruction in an unemotional and wholesome manner.

In the high school, boys and girls reach the age when the instinctive and emotional sex urges become strong. During these years there develops an interest and attraction for the opposite sex. Boys have a tendency to be unusually aggressive, which apparently reflects the unusual vigor, growth, and vitality which marks the period of adolescence extending from puberty to maturity. During these years there is also a great emotional and intellectual expansion, and an increase in the interests of boys and girls. It is important that the school program recognize the characteristics of adolescents. In doing this every reasonable opportunity should be given for freedom in making decisions and choosing activities; the spirit of inquiry and exploration should be encouraged; opportunities for direct contact with nature and with the real affairs of life should be provided; and the practice of abstract thinking and the development of ideals should be encouraged. It is generally agreed that children of high school age are inclined to be more idealistic than at other ages. The expression of this tendency should be directed by teachers in such a way as to help boys and girls develop a sound philosophy of life. The application of the basic principles of this philosophy to behavior in actual situations in life should be made.

If a person hopes to live successfully it is not sufficient that he be an individual of good character. One may have practically all the desirable character traits such as honesty, fairness, loyalty, courtesy, tolerance, and patience, and yet fail to direct his life along the road which will lead to the most fundamental and lasting successes and satisfactions. It is essential that a person know the worthwhile objectives of living and be able to guide his thinking and conduct toward the achievement of these objectives. An excellent character provides a good means or vehicle for reaching the desired ends, but it is only sound principles and high ideals that will guide one accurately and directly toward a good life.

Adolescent boys and girls should have opportunities for the expression of their interests, desires, and urges and for the development of these natural tendencies into desirable character traits and workable

ideals. In order to do this a variety of activities, in addition to the necessary instruction in fundamental subject matter, must be provided. Athletics is the activity most commonly provided. Others that are valuable for this purpose include dramatics, musical organizations, literary societies, parties, dances, camping trips, hikes, and other kinds of outing activities.

It has been pointed out by Gruenberg¹ that in the high school grades there is a need for giving boys and girls instruction concerning the basic facts of reproduction and sex and of the problems, opportunities, and responsibilities that are associated with them. He divides this instruction into three kinds: "*information*, which comes chiefly in connection with courses having a biological foundation, such as botany, zoölogy, biology, agriculture, physiology, hygiene, home nursing; *interpretation*, which comes chiefly in courses dealing with human nature and human relations, such as literature, history, sociology, psychology, economics, civics, home-making courses; and *inspiration*, which comes not from school subjects but from people, whether the living contemporaries of the pupil's daily program or the vicarious but not less vital companions of fiction or history."

Every teacher should have the necessary professional preparation, the traits of character and ideals to teach fundamental facts of sex and their implications to his pupils. This is especially true of physical education teachers because in many informal situations they deal with their pupils in intimate contact which enables them to give a great deal of helpful advice and guidance.

Who should teach health? The person or department in a school with the best qualified teachers and with the best laboratories and equipment should teach the organized courses in health. It is a common practice for the physical education department to be assigned the responsibility for teaching the separate health courses, and in many schools it is probably true that the teachers of physical education are best prepared teachers for this work. It should not be accepted as an established fact, however, that the physical education teachers in every school should do the teaching of health. Cairns² concludes as the result of her study in California, that in junior and senior high schools health can be taught best by the teachers of the fundamental sciences, who have the time and the laboratories. "In the junior high schools, biology and general science; in the senior high schools, physiology, biology, and general science include the greatest number of the essentials of health instruction. . . . Any attempt to assume the re-

¹ Benjamin C. Gruenberg, *High Schools and Sex Education*, pp. 9-12. Washington: Government Printing Office, 1922.

² Laura Cairns, *A Scientific Basis for Health Instruction in Public Schools*, pp. 417-18. Berkeley: University of California Press, 1929.

sponsibility for health instruction by groups other than those prepared to teach the underlying principles and having laboratories where the students may have first-hand experiences, results in dogmatic instruction."

Since it is true that in many schools, for administrative and instructional convenience, the physical education teachers are expected to teach courses in health, it is a good plan for every prospective teacher of physical education to include in his professional preparation such courses as will prepare him for teaching this subject.

The health counselor. The plan that has been found to work best for carrying out a health program in high schools is to have some teacher in each school whose responsibility is to lead, coordinate, and advise in regard to the health program. This person should take the lead in having teachers of different subjects meet and decide what health subject matter should be included in each course so as to avoid duplication and assure that important items be taught. The coordination of health service, health supervision, and health instruction is another function of a health counselor. For example, a relatively small amount of good will result from a health examination unless the teachers are informed as to the results of the examination and the part that they can play in helping their pupils to live in such a way as to prevent or correct health handicaps. The health counselor makes the plans for the health examination of pupils, sees that they are executed successfully, and that the homeroom teacher, physical education teacher, and parents are supplied with a copy of the report of the results.

The health counselor should be chairman of the school health committee and should work with this committee on formulating a health program for the school. It is essential that an attitude or spirit of dictating to the teachers or pupils be avoided, and that it be clearly appreciated that the person occupying this position is a counselor, coordinator, or adviser, and not a supervisor or inspector.

Weighing and measuring. Weighing children once a month and measuring their height at least twice a year is an educational device that has justified itself and should be recommended for use in all schools. It is important to emphasize the fact, however, that the weight records should be used for educational purposes and as a means of checking individual growth progress, and not for diagnostic purposes to determine whether a child is properly nourished.¹ Physicians, teachers, and parents have often made the mistake of comparing the weight of an individual child with the average weight of children of

¹ Ann Whitney, "The Weighing and Measuring of School Children," pp. 39-45, in *Child Health Bulletin*, March, 1931. New York: American Child Health Association.

Year **Teacher**

School **Section**

Grade **Room**

[illegible]

his same age, sex, and height as a means of determining nutritional status. It has been stated frequently that any child who was as much as 10 per cent below the average weight for his height and age was underweight and probably malnourished, and that any child whose weight was as much as 20 per cent above the average was overweight. Recent studies¹ show that the use of height-weight-age tables in this way is unscientific and should not be continued.

Some of the measurable objective things that have been found to indicate nutritional status are size of musculature and thickness of subcutaneous tissue when they are considered in connection with height, width of hips and chest, depth of chest, age, and sex. The subjective judgments of examiners concerning such items as dark circles under the eyes, pale mucous membrane inside of cheek or of lower lip, lack-luster eyes, dead-appearing hair, abnormally pale skin, and other observations of this kind, are of practically no value in determining nutritional status. The determination of the state of nutrition of each child requires the careful observation of an experienced physician who is in a position to make use of all measurements in connection with his observation over a period of time.

Since the available height-weight-age tables are based on average weight for a given height, age, and sex, it is recommended that the use of these tables be discontinued. A classroom growth record, similar to the chart reproduced on pages 122, 123, should be kept for each class. The emphasis in connection with the weighing and measuring program should be on regular growth and gain in weight and not on trying to bring every child up to an average weight.

The daily morning inspection. As indicated in a previous chapter the daily morning inspection should be used for the purpose of observing each child for any signs of illness and as an instructional device for teaching children the essential laws of personal hygiene and health behavior in regard to others. It is important that the morning inspection be used as a means of excluding sick children from school but its greatest value lies in the opportunities that it affords for constructive health teaching. It provides an occasion for each child to take a daily inventory of his health behavior and to consider the effects of his conduct on himself and his comrades. It is desirable that the greatest possible amount of pupil participation be secured if the best educational results are to be obtained.

Teachers have shown much originality in devising methods for carrying out a morning inspection. Winslow and Williamson² de-

¹ Raymond Franzen, *Physical Measures of Growth and Nutrition*. New York: American Child Health Association, 1929.

² C. E. A. Winslow and Pauline Brooks Williamson, *The Laws of Health and How to Teach Them*, pp. 247-55. New York: Charles E. Merrill Company, 1925.

scribe a method of having school health leagues with a chief health officer, an assistant chief health officer, deputies, and room health officers. Under each of these room health officers is organized a daily inspection committee who carry out the daily inspection.

Some teachers organize junior boards of health in their classrooms with a health officer, a nurse, and a sanitary inspector elected by the pupils. Among the duties of the health officer and nurse is the daily morning inspection. Wells¹ describes how the inspection was made interesting and real to the children in a first grade by making it a part of "playing family." It became the duty of each "family" (of pupils) to attend to these matters among its members. Each morning there was an inspection of hands, nails, teeth, hair, and handkerchiefs. At first this was done by the "mother." Later the families in joint assembly elected a district nurse who served for a week, making a daily call on each family.

In situations where the pupils make the daily morning inspection it is essential that the teachers observe carefully each child every morning in addition to the inspection made by the pupils. It is not necessary or desirable that the children should be aware that she is checking up on them. In instances where there are cases of communicable diseases and the health authorities think there is a probability of more cases developing, each teacher would do well to conduct a definite inspection of each child every morning in addition to being on the alert throughout every day for any indications of illness among her pupils. The technique² described below has been found to be satisfactory in practice, and it enables a classroom teacher successfully to inspect 35 children in a period of ten minutes. It should not be concluded that the formal procedure suggested here is necessarily the only and best method of making a morning inspection. It is proposed merely as one device which might be used. Individual teachers can probably originate other methods which are better.

Some teachers have taught the routine of this inspection to their pupils as a group in somewhat the same way that a calisthenic drill might be taught. This helps each child to go through the mechanics of the inspection more intelligently and efficiently. When the class is ready for the morning inspection the teacher should take her position with her back to the window so that the light will fall on the pupil being inspected. The children rise by rows and walk slowly toward her, about six feet apart. As each child approaches her, the teacher should observe the posture and general appearance, such as the color

¹ Margaret Elizabeth Wells, *A Project Curriculum*, p. 68. Philadelphia: J. B. Lippincott Company, 1921.

² *Manual of Health Supervision*, pp. 26-27. Montgomery, Alabama: State Department of Education, 1924.

of the skin, any bandages, or a limp. Each child, when he is within about four feet of the teacher, should stop and face her and go through the following motions on count. (He counts for himself.)

1. Raises the hands and gives the teacher a chance to observe the back of the hands and arms to see if they are clean, the nails well cared for, and the skin reasonably smooth and not chapped.

2. Turns the arms over and spreads the fingers so that the teacher can look between the fingers and at the front of the elbow joint for signs of itch.

3. Bends the head and body forward, thus giving the teacher an opportunity to see if the head is free from vermin and dirt, and whether the condition of the clothing is satisfactory.

4. Turns the head to the left so as to show the right ear so that the teacher can see whether there is any discharge from the ear or any cotton in it.

5. Turns the head to the right so as to show the left ear.

6. Raises the head and looks at the teacher so that she can see if there is any inflammation of the eyes.

7. Opens the mouth, showing the teeth.

8. Opens the throat, at first saying "ah-h-h," which gives the teacher an opportunity to see the condition of the throat.

If the teacher observes any child who has one or more of the following signs he should be excluded from school and every precaution taken to assure freedom from contagion before he is allowed to return:

1. Fever.

2. Running nose and eyes.

3. Sore and inflamed throat.

4. Any kind of rash or "breaking out."

In making the daily health inspection, teachers would do well to consider carefully the following suggestions:

1. Never attempt to make a diagnosis. If a child seems to be ill, isolate him from other children and, if possible, send him home. A note should be sent to the parents stating that the child seems to be sick and suggesting that a physician be called.

2. Never suggest any kind of treatment.

3. Never suggest the use of any kind of medicine.

4. Never recommend any particular doctor.

5. Avoid discussions and arguments with parents concerning health matters.

6. Do not give any kind of medicine to a child at school.

7. Try to avoid touching the pupils in any way during the inspection.

The supervised school lunch. The lunch period at school provides many opportunities around which health instruction can be organized. It is not meant by this statement that teachers should attempt to teach health or talk about what should be eaten during the period in which the pupils are supposed to be eating, but that lunchroom situations, which can be controlled to a considerable extent, do provide an actual and interesting background for a great deal of valuable health teaching in regard to food selection, habits of eating, physiology of digestion and elimination, and the ways food should be prepared.

In schools that have cafeterias and lunchrooms, the teachers do not as a rule have much responsibility in connection with its operation. In other schools, however, such as consolidated schools in rural districts and small towns where a large number of the pupils bring their lunch from home and eat it at school during the noon hour, it has been found to be worth while from a hygienic and educational point of view for the teachers to conduct supervised lunch periods in their rooms. The steps in a method of conducting a supervised lunch period are: first, for all pupils in a room to wash their hands; next, after all pupils have returned to their desks, for each pupil and teacher to spread a piece of paper (which he should bring with his lunch) on the top of his desk and place his lunch on it; and then to proceed with the lunch in a leisurely and orderly manner. Conversation should be carried on as pleasantly and socially as if the group were seated around a table. After all have finished eating, monitors pass waste paper baskets down the aisles and collect all the waste paper and scraps of food; the pupils then are at liberty to leave the room. Many teachers who have tried having a supervised lunch period are very enthusiastic about it. They believe that it improves the quality of the lunches the children bring to school; it permits children to have a warm, comfortable, pleasant, and orderly place in which to eat their lunches; it results in keeping the school buildings and grounds cleaner and freer from unsightly paper and scraps of food; it is more democratic, in that all pupils eat their lunches under the same conditions and pupils from poorer homes, whose lunches may be less attractive, are protected from snobbish remarks of other children; it improves the table manners of the pupils; and it provides a background of experience on which to base some health instruction.

The Blue Ribbon Project. The Blue Ribbon Project, a device for stimulating interest in school health work and for measuring the results, was originated in 1925 by the health education staff of the Mansfield and Richland County, Ohio, Child Health Demonstration. The project has been copied in a number of other situations and seems to have functioned with a reasonable degree of success. Con-

ORGANIZATION OF HEALTH PRACTICES ¹

The health practices listed below are those which should be developing through the kindergarten, first, second and third grades, and for the most part become habituated by the end of the third grade and fixed in the fourth grade. The chart indicates where major and minor emphasis falls.

Units of Work	Health Practices	Major Emphasis * Minor Emphasis x			
		Kgn.	1	2	3
CLEANLINESS					
	1. To come to school with clean face and hands	*	*	x	x
	2. To take a full bath at least twice a week	x	x	*	*
	3. To brush the teeth before coming to school and before going to bed	x	*	*	*
	4. To wash the hands before touching food	x	x	*	*
	5. To wash the hands after using the toilet	*	x	x	x
	6. To keep the fingers out of mouth and nose	*	*	x	x
	7. To bring a clean handkerchief to school	*	*	x	x
	8. To use drinking fountain in sanitary manner	*	*	x	x
	9. To help keep the school toilets neat and clean	x	*	*	x
FOOD, DRINK					
	1. To eat a nourishing breakfast before coming to school	x	x	*	*
	2. To avoid food partly eaten by others	x	x	*	x
	3. To refrain from eating food after it has fallen to the floor	x	x	x	*
	4. To sit down to eat and chew food thoroughly	x	x	*	*
	5. To drink a glass of milk with every meal	*	*	*	x
	6. To drink no tea or coffee	x	x	x	x
	7. To drink at least four glasses of water daily		x	x	*
	8. To take a drink of water at recess	*	*	*	x
	9. To eat some fruit every day	x	x	*	*
	10. To eat at least one vegetable in addition to potatoes every day	x	x	*	*
	11. To eat some hard bread or other coarse grained food daily	x	*	*	x
	12. To eat no sweets between meals	x	x	*	*
SLEEP					
	1. To sleep in a dark room	*	*	x	x
	2. To sleep a sufficient number of hours daily	x	x	*	*
	3. To sleep with the windows open	x	x	**	*
	4. To use a small pillow or none	x	x	*	*
REST					
	1. To refrain from disturbing others who are resting	*	*	x	x
	2. To relax completely during rest period	*	*	*	*

¹ Health Education—*Course of Study for Kindergarten and Grades One, Two, Three, Four, Five, and Six*, pp. 14-15. Long Beach, California: Long Beach City Schools, 1921.

Units of Work	Health Practices	Major Emphasis *			
		Minor Emphasis x			
		Kgn.	1	2	3
OUTDOOR PLAY—SUNSHINE—FRESH AIR					
	1. To play actively out of doors a part of every day	*	*	*	*
	2. To play fair	x	x	x	*
ELIMINATION					
	1. To evacuate the bowels daily at a regular time	x	x	x	*
	2. To attend promptly to needs of defecation and urination.	*	*	*	x
EYES					
	1. To choose a reading position in which the light is good		x	x	*
	2. To hold the head at least 14 inches from the book or paper			*	*
NOSE AND THROAT					
	1. To cover the mouth and nose with a handkerchief when coughing or sneezing	x	*	*	*
	2. To keep the nose clean, to breathe with the mouth closed	x	*	*	x
POSTURE					
	1. To point the toes straight ahead when standing or walking	x	x	*	x
	2. To walk with head erect	x	x	*	*
	3. To "sit high" and to "stand tall"	x	*	*	x
	4. To choose a chair of suitable size	x	*	*	x
CLOTHING					
	1. To wear clothing suited to the weather	x	x	x	*
	2. To remove rubbers and outer wraps when indoors	*	*	x	x
¹ DRUGS					
	1. To avoid taking anything harmful into the body	x	x	x	*
SAFETY					
	1. To keep to the right when coming through doors, going up and down stairs, on the sidewalk, and crossing the street		x	*	*
	2. To carry the classroom chair so as to avoid injury	*	*	*	*
	3. To refrain from playing in the street	x	*	x	x
	4. To watch the traffic policeman and cross the street when he gives the proper signal		x	*	*
CHEERFULNESS					
	1. To be cheerful and helpful in work and play at home and at school	x	x	*	*

¹ The State law (California) requires that instruction be given in every grade on the harmful effects of tobacco and alcohol.

siderable criticism has been directed at this and other devices which use a system of artificial awards. The critics point out that the blue ribbon or a gold star have no direct relationship to health behavior and that children are encouraged to behave in certain ways in order to get the ribbon or star. These persons claim that it is conducive to the development of undesirable character for children to display traits which they believe will be approved rather than by acting in the way that is intrinsically appropriate to the situation and to the needs of the persons who are involved in it.¹ It is believed that pupils should be taught to live healthfully in order that they will be better prepared to meet the situations that arise during their daily lives, to solve the problems that confront them, and to get more satisfaction and pleasure out of living, rather than for the purpose of getting a blue ribbon or a gold star.

It is probable that a device of this kind might be justified as a scaffold or crutch to help in getting a health program started in situations where there have never been effective programs of health instruction.²

The use of charts. There has been quite a widespread use of charts, score cards, check lists, and like devices in connection with health teaching in both elementary schools and high schools. Many of these efforts have been educationally unsound and it is questionable whether worthwhile results have been secured from their use.

An excellent organization of health practices is shown in chart form in the Health Education Course of Study for the Elementary Grades of Long Beach, California. This chart enables the teachers and pupils to see clearly the units of work in health for these grades, the definite health practices included in each unit, and the grades in which each practice is to be emphasized. It is given on the two preceding pages.

Summary. The available evidence, which includes data from mortality and morbidity rates shown in the reports of the United States Public Health Reports, indicates that health instruction should occupy an important place in our educational program. The purpose of the program of health instruction in the elementary school should be to develop knowledge, habits, and attitudes which will help pupils to live happily and successfully. It is helpful in teaching to set up definite and specific goals in regard to health knowledge, habits, and attitudes, which should be achieved by the end of certain periods in the school life of each child.

¹ *Character Education*, p. 72. Tenth Yearbook of the Department of Superintendence. Washington: National Education Association, 1932.

² *Report of the Mansfield and Richland County Child Health Demonstration*, pp. 80-81. New York: American Child Health Association, 1926.

The way of arranging and organizing health subject matter for instructional purposes, and the plan of assigning the major responsibility for health teaching should be different in different situations. The technique of arranging health subject matter around specific interests or problems of the pupils is used successfully in a number of situations. The systematic-incidental method is also believed to have some advantages.

Sex education is a phase of health education in which there is still considerable difference of opinion as to desirable subject matter and methods of instruction. It is believed by many educators that the best plan of teaching sex education is to explain these matters as they naturally arise in the wholesome everyday experiences of the children.

The person in each school who is best qualified should teach the classes in health education. This is not always the physical education teacher. It has been found to be a good plan in high schools to have a health counselor whose responsibility it is to lead, coördinate, and advise with regard to the health program. The regular weighing and measuring of pupils, the daily morning inspection, the supervised school lunch, the Blue Ribbon Project, and the use of charts and posters, have proved to be valuable devices in health instruction.

QUESTIONS

1. What is the purpose of health instruction in the elementary school?
2. What specific goals in regard to health knowledge, habits, and attitudes should be achieved by pupils who finish the sixth grade?
3. How may the systematic-incidental method be used in teaching health?
4. What has been proposed as a satisfactory plan of teaching health to all pupils in a high school?
5. What are some methods of arranging health subject matter for instructional purposes?
6. What is believed to be the best method of teaching sex education?
7. In what way does a health counselor function in a high school?
8. What are the values of a weighing and measuring program in a school? How should such a program be carried out?
9. What are the purposes of a daily health inspection by the teacher? What are some of the methods of conducting such an inspection?
10. What are the values of a supervised school lunch? What are the methods of conducting a supervised school lunch?

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CHAPTER VIII

STANDARDS FOR THE PHYSICAL EDUCATION PROGRAM

Importance of a clear conception of physical education. In planning a program of physical education it is essential that every one concerned have a clear understanding of physical education, what it is, its values, its scope, and its purposes. Especially should it be recognized that the foundation of physical education rests in the philosophy and psychology of education and in the biological sciences. It is also necessary that physical education be accepted as a definite and desirable part of the school program and be recognized as one of the "major instructional and administrative divisions of education."

The beliefs different people have in regard to physical education are partly the result of the experiences they have had in motor activities. One who served in the army is likely to think of physical education as calisthenic exercises. A baseball or football enthusiast probably thinks the major sports provide the entire content of the program. Opinions of others may be shaped by exhibitions of tumbling, dancing, wrestling, or boxing, or experiences with reducing exercises and "daily dozens." Limited experiences like these are frequently the cause of misconceptions concerning the educational significance of situations which stimulate learning through socialized activity such as the normal play life of children provides.

A person's interpretation of physical education is affected by a number of other influences, including his philosophy of life, his attitude toward other people and toward organized society in general, his ideas concerning the purpose of education, his views concerning the unity of human personality, his opinions as to what constitutes success in life, his plans and hopes in regard to the life careers of his children, and his attitude toward people in the various economic and social classes in our social organization.

Current opinions about physical education. Some of the common misconceptions of physical education have been stated by Allen G. Ireland¹ as follows:

¹ *Standards in Physical Education*, p. 7. Trenton, New Jersey: Commission of Education State of New Jersey, 1932.

- that the plays of children are pastimes in a period when the brain is developing.
- that mental learning exists apart from the physical basis of life.
- that physical education exists primarily to provide muscle exercise and development.
- that the play of the child is analogous to the recreation of the adult.
- that exercise in work or in walking to school can be a substitute for education.
- that drills in man-made exercises can be substituted for play-situations.
- that children get enough developmental activity outside of school.
- that the play of children, dancing in particular, is primarily for pleasure and not a manifestation of a deeper spiritual nature.
- that physical education is health insurance.
- that it is essentially an energy-release process.
- that it is a system or subject rather than a field or method of education.

The following statements by La Porte¹ express the conceptions of physical education that are held by persons who are familiar with the objectives and program of present day physical education:

1. Physical education is no longer considered as a trailer or addendum to education, but as an integral part of education.
2. It no longer is a subject *in* education, but a field *of* education.
3. It is no longer an educational *child*, but an adolescent *youth*.
4. It is not a "system," but a definite method of education through muscular and emotional experience.
5. It is not a "panacea for ills," but a combination of specific media for securing varied results.
6. It is not a mischief-preventive, but a stimulating form of leisure-time expression.
7. It is not an energy-release mechanism, but a developer of character and moral traits.
8. It is not merely an exercise medium, but a method of developing poise and power of self-expression.
9. It is not a promoter of military precision, but a developer of intelligent leadership.
10. It is not a health insurance, but a valuable aid to health.
11. It is not a mere physical developer, but a promoter of fine adjustment between physical and mental.
12. It is not merely an athletic battle of brawn, but a test of wits in physical-social competition.
13. It is not a stimulant to emotional frenzy or explosion, but to the development of emotional stability under pressure.
14. It is not a menace to life and limb, but a developer of safety skills.
15. It is not merely a preparation for adulthood, but a training for good citizenship *now*.

¹ Wm. R. La Porte, "The Changing Conception of College Physical Education," *Research Quarterly of the American Physical Education Association*, II (March, 1931), 5.

The need for planning the program. Throughout this book emphasis is placed on the importance of providing a physical education program and a quality of teaching that will stimulate creative activity on the part of the pupils, will encourage them to solve the problems which arise, and will lead them in interesting and purposive behavior. This emphasis on self-directed pupil activity does not mean that there can be any less conscientious and intelligent planning and work on the part of the teachers. Teaching in the light of these ideals requires teachers, methods, and preparation which are superior to the ones needed in the more traditional type of instruction where the teacher and his personality dominate the entire teaching situation. It is necessary that each teacher plan his instructional program in such a way as to lead his pupils successfully in setting up objectives; to make provision for individual differences of pupils; to grade the instructional content of the program to meet the needs of different age groups; to make the most effective and economical use of the available time; and to provide for the measurement of the results achieved.

The course of study. A course of study covering the work of each grade or group for the entire school year should be used by each teacher. Past experience has indicated that better teaching takes place and more worthwhile results are secured when teachers have a well constructed course of study to guide them. A course of study should make suggestions concerning the aims of education, the aims and objectives and goals of physical education, criteria for the selection of content, criteria for the organization of content, standards for the selection of methods, criteria for the selection of outcomes, the organization of methods and of outcomes, and the measurement of results.¹ An inflexible prescription of subject matter and activities should not be used as a course of study. Drill on techniques and fundamental skills should be avoided except when it has a definite and clear meaning to the pupils. The pupils should recognize the need of drill and practice on fundamental skills to help them do better some game, athletic event, or project before the drill is prescribed.

In most school situations it will not be practicable for an individual teacher who is carrying a full teaching load to prepare a good course of study. Most teachers, therefore, are advised to follow some good course of study prepared and published by one of the better city or state school systems of the country. Teachers in a number of states

¹ L. Thomas Hopkins, *Curriculum Principles and Practices*, pp. 465-71. Chicago: Benj. H. Sanborn & Co., 1920.

can obtain good courses of study in physical education from their state departments of education free of charge. In nearly all instances ready-made courses of study will require some changes and adaptations to conform to local needs and conditions, but usually an individual teacher can make these adaptations more successfully than he can prepare an entirely new course of study.

The characteristics of the situation in which the program is to be carried out should influence the development or adaptation of a course of study. Some of the conditions¹ that must be recognized are state laws, regulations of state and local boards of education, the number of pupils, the attitude of the community toward physical education, the traditions of the school, the way in which the pupils spend their leisure time, the present and probable future facilities, the climate (including temperature and precipitation of rain and snow), the number and capabilities of the teachers, possibilities of help from individuals and organizations in the community, the type of school organization, the time allotment during the school day and after school hours, the kind and efficiency of supervision available, custom in regard to change of clothing, and methods of assigning pupils to physical education classes.

The activities of the physical education program. The activities which make up the physical education program at the various school levels may be arranged in seven groups. These groups have been outlined² as follows:

I. Aquatics

1. Swimming and diving
2. Life saving

II. Combatives

1. Boxing
2. Wrestling
3. Fencing

III. Gymnastics

1. Gymnastic games and relays
2. Tumbling and pyramids
3. Heavy apparatus
4. Free exercises
5. Marching
6. Stunts

¹ *Standards in Physical Education*, p. 15. Trenton, New Jersey: Commissioner of Education, State of New Jersey, 1932.

² William R. La Porte, "A Study of the Relative Value for Thirty Important Activities in the Physical Education Program for Boys," *Research Quarterly of the American Physical Education Association*, II (March, 1931), 168.

IV. Individual Sports

1. Tennis
2. Track and field
3. Golf
4. Handball
5. Squash and squash tennis
6. Archery
7. Badminton
8. Code ball
9. Horseshoes
10. Skating

V. Rhythmics

1. Clog and tap dancing
2. Natural dancing
3. Gymnastic dancing
4. Folk dancing
5. Singing games

VI. Games

1. Football
2. Basketball
3. Playground ball
4. Soccer
5. Speedball
6. Volley ball
7. Baseball
8. Touch football
9. Water polo
10. Modified games
11. Games of low organization
12. Story plays

VII. Outing Activities

1. Camping
2. Hiking
3. Canoeing
4. Hunting
5. Fishing
6. Winter sports

Hetherington's classification of activities. Hetherington has proposed another classification of big-muscle activities which make up the physical education curriculum. His classification groups the content of the physical education program under three main headings as natural or playful activities, related activities, and formalized or invented movements. This way of grouping the activities recognizes the kind of motive or interests which stimulates participation,

whereas the classification proposed by La Porte groups activities according to the ways in which they may be organized and administered. Hetherington's¹ classification follows.

I. NATURAL OR PLAYFUL ACTIVITIES: ACTIVITIES ARISING OUT OF INSTINCT TENDENCIES

1. *Self-testing Activities. Achievements or Stunts.*
 - a. Locomotor stunts
 - b. Floor or ground stunts
 - (1) individual and partner
 - (2) group (pyramids)
 - c. Apparatus activities or stunts; apparatus play or gymnastics on playground and gymnastic apparatus
2. *Dramatic Activities*
 - a. Impersonating plays; story plays
 - b. Constructive dramatics, circus, etc.
3. *Rhythmical Activities. Dancing.*
 - a. Singing games and folk dancing
 - b. Gymnastic dancing
 - c. Esthetic dancing, interpretive and expressive dancing
 - d. Social dancing
4. *Hunting Plays and Games*
 - a. Chasing, fleeing, tag or "it" games
 - b. Tag ball games (not athletic or team games)
5. *Athletic Activities or Contests* (measurable or scorable activities)
 - a. Individual events: running or track events and floor or field events; also measurable elements of athletic games and adjustment achievements.
 - b. Athletic games
 - (1) single and dual (tennis, racquets, etc.)
 - (2) team games (minor or major operation)
6. *Personal Combative Activities*
 - a. In combative plays
 - b. In formal fighting activities or achievements
 - (1) wrestling
 - (2) boxing
 - (3) fencing
 - (a) single stick (cane)
 - (b) broadsword
 - (c) foils
 - (4) miscellaneous forms

¹ Clark W. Hetherington, *School Program in Physical Education*, pp. 16-19. Yonkers, New York: World Book Company, 1922. Quoted by permission of and by arrangement with the publishers.

7. *Water Activities* (Aquatics)
 - a. Wading, swimming, and diving activities
 - (1) swimming and diving achievements
 - (2) swimming contests
 - (a) individual events (also teamed)
 - (b) team games
 - b. Boating and canoeing activities
 - (1) rowing and paddling achievements
 - (2) contests
 - (a) individual events or contests
 - (b) crew rowing and paddling events
 - c. See *sailing* under (II, 10, b)
8. *Winter Activities* (Snow and Ice)
 - a. Snow dramatizations and games
 - b. Locomotor achievements
 - (1) skating, stunts, figure skating
 - (2) skiing
 - (3) snowshoeing
 - c. Snow and ice contests; winter contests
 - (1) individual events
 - (a) skating and jumping events or contests
 - (b) skiing and jumping events or contests
 - (c) snowshoeing events or contests
 - (2) team games; skating games

II. RELATED ACTIVITIES: ACTIVITIES ARISING OUT OF NECESSITY OR A "NATURE" OR INDUSTRIAL INTEREST

9. *Locomotor or Place Adjustments*
 - a. Walking from place to place
 - b. Locomotor adjustments with aid of animals and play machines
10. *Outing Activities Involving a Nature Interest* (chiefly of value for week-ends and holidays, or for adults)
 - a. The more vigorous forms
 - (1) tramping or "hiking"; climbing
 - (2) nature excursions
 - (3) bicycling trips
 - (4) canoeing trips
 - (5) hunting and fishing trips (with tramping)
 - (6) horseback riding
 - b. The more passive forms
 - (1) shooting (marksmanship without tramping)
 - (2) camping (apart from tramping) and houseboating

- (3) driving
 - (4) fishing (without tramping)
 - (5) sailing
 - (6) power boating
11. *Industrial Activities* (especially those involving free, vigorous and stimulating muscular activity; i.e., gardening, vigorous manual activities, etc.)

III. FORMALIZED OR INVENTED MOVEMENTS: EXERCISES AND DRILLS

12. *Marching, Tactics or Military Drill. Formalized Locomotion.*
13. *Postural Instruction*
14. *Drills* (corrective, disciplinary or developmental movements; calisthenic or gymnastic drills)
15. *Special Corrective Movements or Gymnastics* (selected for a special functional purpose)

The physical education periods. The periods which should be used in carrying out the physical education program are the instructional periods, the participation periods, the relaxation periods, and the recess periods. No physical education program is complete if it does not provide organization and leadership for all four types of periods.¹

The instructional period is the time assigned to physical education in the daily schedule during regular school hours for teaching physical education to all the pupils. This period should be used primarily for instruction rather than for recreation or relaxation. An objective that every physical education teacher should have for the instructional period is to improve the motor skills of all the pupils. It should be recognized that some individuals are endowed with more native motor ability than others and that some can never develop a high degree of skill. The skills of each pupil, however, should be improved and a determined effort should be made to bring the achievement of every one up to a minimum level. Teachers must keep in mind the fact that the physical education period is placed in the school schedule so that all pupils may have the benefit of instruction, and that it is a most valuable opportunity as well as a responsibility for real teaching. Probably no other period in the school day offers such good opportunities for bringing about desirable changes in boys and girls and for teaching "ways of behaving." During the instructional periods pupils should be taught the activities and drilled

¹ Jackson R. Sherman, "Standards in the Administration of a State Program of Physical Education," *Journal of Health and Physical Education*, I (June, 1930), 25-27, 38-39.

on the fundamentals of games which may be used in intramural competition, field meets, play days, and other participation periods.

Teachers do not all appear to appreciate the purpose and importance of the instructional periods in physical education. Some elementary school teachers who have the responsibility for teaching physical education in their grades seem to be devoid of any interest in the play life of their pupils. They sometimes indicate their lack of interest by failure to prepare their physical education lessons, by standing around on the playground or in the gymnasium in the rôle of spectator or policeman during the physical education period, and by permitting the time assigned on the schedule for physical education to be used for the various interruptions that occur in the school program. Some teachers of physical education in high schools indicate equally as clearly that they have not attached enough importance to the instructional period and to the results that should be secured.

The participation periods are the occasions during the noon periods, in the afternoon after school hours, and on Saturdays and holidays when the pupils participate in the activities which have been taught during the instructional periods. The participation periods are most commonly organized as an intramural program which includes tournaments and leagues in different types of activities. A basketball league provides an illustration of how these two kinds of periods might be used. During the instructional periods the boys should be taught the skills and techniques of basketball and should be helped in perfecting the organization of the intramural basketball league. After school on two afternoons each week, for example, every boy should participate in basketball games which provide opportunities for putting into use, in a competitive situation, the basketball knowledge, skills, and techniques he has learned during the instructional periods.

The relaxation periods are usually of about two minutes' duration and should occur about once every hour. These periods are necessary only in traditional-type elementary schools which are organized and conducted in such a way as to require pupils to remain seated for an hour or more at a time. The relaxation periods should provide opportunities for the pupils to stand up, to move about, to talk, and to be free from unnatural restraint. In some small schools it may be practicable, when weather conditions are suitable, to permit children to go out-of-doors during the relaxation periods. The custom of giving calisthenic exercises during the relaxation periods is contrary to the idea of relaxation and should not be followed.

Some schools have long noon recess periods during which a number of the pupils remain at school instead of going home for lunch. Where

such conditions exist it should be the responsibility of the physical education program to provide a suitable form of activity for the children who remain at school. Intramural competition in strenuous team games such as basketball should not be scheduled during the noon period, for the reason that it is commonly believed to be unwise to exercise vigorously immediately after eating and because the children who go home for lunch will be tempted to rush home, eat hurriedly, and hasten back to school in order to play on their teams.

The time allotment. In elementary schools it is recommended that there be a minimum of five instructional periods a week, each period being at least thirty minutes long. In junior and senior high schools recommended practice is to have five instructional periods a week of sixty minutes each. As much time as is practicable should be provided outside of the regular physical education periods for the participation of both elementary school children and high school pupils in games and other recreational activities. At least two afternoons each week should be made available to each pupil for participation of this kind.

These recommendations are in keeping with practices in many of the better schools of the country, they conform to the standards set forth by the Department of Superintendence of the National Education Association in the *Sixth Yearbook*, and they are in agreement with committee reports and the expressions of expert opinion.

In planning the daily schedule for rural schools it may occur to some teachers that it seems out of proportion to allow thirty minutes of the teacher's time for physical education and much shorter periods for other subjects; for instance, twelve minutes for third-grade arithmetic, eight minutes for fourth-grade spelling, fifteen minutes for sixth-grade English, and twenty-five minutes for fifth-grade reading. It should be remembered, however, that the thirty minutes given to physical education in a rural school is for the entire school. If there are six grades in a one-teacher school, the teacher is giving only five minutes for physical education to each grade, which does not seem out of harmony with the time given to other subjects.

Size of classes. In both elementary schools and high schools the size of the classes for physical education should be preferably not more than forty pupils. It is possible for a good teacher to do reasonably satisfactory work with classes of sixty, but not very much individual instruction can be given. Classes of seventy-five represent the maximum size where any teaching can be attempted by the teacher. If classes have more than seventy-five pupils the teacher of necessity becomes merely an organizer and director instead of a

teacher. In individual gymnastic classes and other types of special classes the maximum enrollment should be fifteen.

The personnel. It is the opinion of the author that in the first six grades the work in physical education should be taught by the classroom teachers if the schools are organized in the traditional way. In platoon schools and other special-type schools it is desirable to have special teachers of physical education. In about three-fourths of the 420 cities with populations of more than 10,000 which reported to the United States Office of Education in 1929, the classroom teachers in the elementary schools taught the physical education work for their pupils.¹ In most of these cities the teachers were assisted in this work by a supervisor of physical education who worked in all the schools of the city. This same study indicated that there was a tendency for teachers of other subjects in high schools to assist with the physical education program although the teaching of physical education in junior and senior high schools was done largely by special teachers of physical education.

In cities, counties, and other political units where the elementary school teachers are responsible for teaching physical education, there should be at least one supervisor or helping-teacher of physical education for each one hundred classroom teachers employed. In some rural communities where most of the schools are one-teacher schools and the distances between schools are great, one supervisor should be employed to help a smaller group than one hundred teachers.

Beginning with the seventh grade, men should teach the physical education for the boys and women should teach the girls. In every high school there should be at least one man and one woman who have had some professional preparation in physical education. In small high schools these teachers will necessarily have to teach other subjects in addition to physical education. There should be one full-time teacher of physical education in a high school for each group of 250 pupils enrolled in school.

The teaching load. There are no definite and authentic data which show just how many hours a week a teacher should teach or the number of pupils that should be assigned to each teacher in order to secure the most effective results. The reports of the experiences and observations of a large number of educators indicate, however, that twenty-five instructional periods a week and ten periods for conferences and supervision of after-school participation make the most satisfactory teaching load for teachers of physical education. This is a somewhat heavier load than is recommended by the North

¹ Marie M. Ready, *Physical Education in City Public Schools*, p. 1. U. S. Office of Education, Physical Education Series No. 10. Washington: Government Printing Office, 1929.

Central Association of Colleges and Secondary Schools, which recommends the following norms: ¹

- (1) Pupil-teacher ratio, 25 to 1.
- (2) The number of classes taught by the teacher, five daily.
- (3) The total number of pupil-periods per day, 150 per teacher.

The function of supervisors of physical education. It has been found that better programs of physical education are followed and better teaching results where supervisors are employed. Some of the things supervisors do are to help teachers set up objectives for each group of pupils in all the different activities; to help teachers plan their programs in light of these objectives; to give suggestions to teachers concerning the improvement of teaching; to suggest and help carry out techniques for measuring results; to assume the responsibility for making schedules, arranging tournaments, and carrying out special projects such as field days, play days, and demonstrations; to carry forward a program for the professional improvement of teachers in service; to stimulate members of the staff to carry on research and experimentation; and to take the lead in the development of a course of study.

Teachers of physical education in individual schools, as well as the supervisors of physical education, should keep in mind the fact that the head of each school is the principal, and that it is to him that all teachers are directly responsible. A supervisor should maintain the attitude of a helper who visits schools for the purpose of helping principals and teachers with the physical education program. These visits, preferably, should be the result of an invitation from the principal. In some school systems the supervisors are called "helping teachers," which term probably expresses more clearly their function. It is important for supervisors of physical education to realize that they should not assume any administrative authority, or attempt to give orders to teachers and principals, or to set up a program independently of the rest of the school program which the principal is advocating.

McGaughy ² emphasizes the necessity of organizing a school system in such a way that supervisors will function as service agencies to the principals and teachers, and not as officers of administration. He states that

Under this organization the relationship of the supervisor to the building principal is conducive to supervision of the most constructive and effective

¹ "Policies, Regulations, Standards, and Recommendations for Accrediting Secondary Schools," *North Central Association Quarterly*, VIII (June, 1938), 118.

² J. R. McGaughy, quoted in the *Seventh Yearbook of the Department of Elementary School Principals*, pp. 246-47. Washington: National Educational Association, 1928.

kind. The supervisor is without power or authority to make demands upon the principal or any of his teachers; the principal, therefore, cannot be embarrassed or confused in accepting full responsibility for the educational program within his school. The supervisor must be an adviser and sympathetic helper, working in full coöperation with the principal and the teachers if she is to succeed in her position. The relationship between a teacher and a good supervisor is most delicate and is subtly affected by conditions of apparently minor importance. The supervisor who is in a position to make demands or to exercise authority is at once placed under a serious handicap as an inspiring, constructive advisor and helper of either principals or teachers. It is in this sense that a "conflict" between a supervisor and building principal is completely impossible under a sound plan of organization. In the administrative sense, the principal can *never* be wrong.¹

State standards of physical education. Several states have published definite standards for judging a program of physical education. The most comprehensive work of this kind has been done by the California State Department of Education. This Department has published two score cards of approximately fifty pages each for evaluating physical education programs for high school boys and for high school girls. Each of these score cards provides for rating the instructional staff, the facilities, the organization of the program, the program of activities, and the professional assistance provided in the way of books and magazines.

The high schools in some states give credit toward high school graduation and college entrance for work in physical education. The schools which offer such credit are expected to meet certain minimum standards in regard to program, staff, and facilities. A statement of the standards issued by the State Department of Education in Ohio is given below:

STATE OF OHIO

DEPARTMENT OF EDUCATION

STANDARDS OF HEALTH AND PHYSICAL EDUCATION IN SECONDARY SCHOOLS

Explanation: Standards for recognized high school programs of health and physical education are given herewith. Programs, so to be recognized, must satisfactorily meet all the standards.

STANDARD I—TIME ALLOTMENT

A. Minimum of two regular class periods per week for all grades. Total minutes per week for any pupil shall not be less than 100.

¹ *Ibid.*, pp. 246-47.

(1) The State Department recognizes interscholastic and intramural athletic contests and practice periods when, and if, a certificated instructor is in charge. Hygiene or health instruction is also recognized as part of the 100 minutes.

(2) Schools having two forty-five minute periods per week may consider their time allotment the equivalent of 100 minutes per week, provided there is opportunity for pupils to play before or after school.

STANDARD II—CERTIFICATION OF TEACHERS

A. Part-time teachers must have at least a minor in health and physical education written in on their provisional or life certificates. This minor is recognized only if secured in an accredited training institution.

(1) The State Department, Division of Teacher Training, issues an annual list of accredited Ohio minor and major training programs. Teachers holding credentials from colleges or universities out of the state must submit them to the State Department for approval.

(2) Athletic coaches are considered teachers of health and physical education and as such they must hold a certificate in the field. After 1935 no program will be recognized unless the coach has a certificate showing at least the minor in health and physical education. All part-time or full-time men and women teachers (coaches) of health and physical education employed after 1930 must be duly certificated from credentials submitted from a college or university accredited in health and physical education.

B. Full-time or special teachers and supervisors must have completed a four-year college or university course, including a major course of 40 semester hours in health and Physical Education in institutions accredited by the State Department of Education.

(1) Completion of such a course entitles the teacher to a four-year special provisional certificate leading to a special life certificate.

(2) The above regulation is not retroactive and special provisional or life certificates issued prior to 1930 will be recognized.

STANDARD III—FACILITIES AND EQUIPMENT

A. All high schools equipped with a gymnasium.

(1) If other indoor space, such as an auditorium, armories, etc., are used regularly by the school, they may be considered as gymnasia.

B. A minimum outdoor play space of three acres.

(1) Because of unalterable conditions in certain schools this standard may, on occasion, be waived.

(2) Three acres is not to be construed as a desirable figure for play areas. All high schools should have at least seven to ten acres wherever possible.

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C. Locker rooms and lockers of such type and quantity as to offer a safeguard of personal property and to provide sanitary and adequate dressing space for all classes.

D. Bathing facilities (showers) in sufficient numbers for the largest classes, with hot water, soap, and towels available during the school day.

STANDARD IV—PROGRAM

A. A physical examination, under the supervision of a licensed medical doctor, for all pupils at least once during the four years; and an annual examination for all pupils representing the school in interscholastic athletics.

B. Health instruction for all pupils given at least one period per week for at least one year during the four.

C. Any school represented by teams in interscholastic athletics a member in good standing of the Ohio High School Athletic Association.

STANDARD V—CREDIT

A. Academic credit to the extent of one unit given to all pupils as a result of the successful completion of the four-year course.

(1) This one unit of credit may be given in portions of not more than one-fourth of a credit a year and may be within or in addition to the 16 required for graduation. Some Ohio colleges will now recognize the unit within the 16—others will do so as more high schools offer approved four-year programs.

(2) This standard is in accordance with Section 7721 of the Ohio School Laws which states that "credits and penalties shall be applied for success or failure in physical education courses as in other subjects."

Facilities needed for physical education. The facilities needed for physical education include playing fields, tennis courts, and baseball diamonds; gymnasiums, play sheds, handball courts, squash courts, locker rooms, shower rooms, and swimming pools; and a variety of supplies and equipment such as balls, bats, nets, and gymnasium apparatus.

A number of individuals and committees have recommended standards for the size of school sites. Among the sources are the report of a study conducted by the National Conference on City Planning, the recommendations of the National Recreation Congress in 1923, the Report of the Committee of the National Education Association on Schoolhouse Planning, and the books on standards by Professors George D. Strayer and N. S. Englehardt of Columbia University. According to conservative standards, the minimum size of a school site for an elementary school should be five acres and for a high school ten acres. The schoolhouse should be so located on this site as to allow the maximum amount of space for playfields. The

grounds should be laid out to provide for the different team games, for track and field sports, and for the individual sports such as archery, tennis, and handball. In every section of the country one or more outdoor courts should be surfaced with asphalt or concrete so that they may be used under practically all conditions of weather.

In all sections of the United States it is necessary to have some form of shelter under which physical education classes can be conducted when weather conditions are unfavorable for conducting classes out-of-dors. Rainfall, wind, sandstorms, and hot sun, as well as the low temperature and snow in the northern sections of the country, are conditions which make a shelter necessary. In planning a gymnasium the most important guiding factor is the function it is to serve. The need of the regular physical education classes should be given first consideration; then the extracurricular activities and the use of the building as a community center should be considered.¹ When a new building for physical education is under consideration in a community, the teachers of physical education should assume the responsibility for making a most complete study of the needs of the community and of the whole problem of gymnasium construction. They should also insist that they be permitted to advise concerning the uses to which the building will be put and that the building be planned in light of these functions. Too often teachers of physical education who are teaching in a community fail to realize the importance of taking an interest in the discussions and plans with regard to a new school building. They may find, when the gymnasium is completed, they must pay the penalty for neglect, because the planning has been faulty. The time to find the faults in the building is before the architects' plans are accepted and the contract let for the construction. After the building is in the process of construction it is almost impossible to make any important changes in the plans.

In any physical education building a number of auxiliary facilities should be provided in addition to the main gymnasium floor and the swimming pool. In many communities these auxiliary facilities (shower rooms, etc.) are of more use than the main floor or the pool. In large schools the auxiliary provisions should include ample examination and consultation rooms for the physicians and nurses, storage rooms, corrective room, locker rooms, shower rooms, and varsity team rooms.

Physical education supplies and equipment. In equipping a gymnasium and in choosing the supplies and equipment for a physical education program in a large school, the items must be selected in

¹ *Gymnasium Planning and Construction*, p. 8. Trenton, New Jersey: Department of Public Instruction, State of New Jersey.

terms of their contribution to the program adopted. This achievement requires much study by the teachers of physical education in the schools concerned. The following list of equipment is suggestive of the articles needed for carrying out programs of physical education in small schools:

EQUIPMENT FOR PHYSICAL EDUCATION ACTIVITIES

Only the best grade and quality of athletic goods should be purchased for school use.

I. ONE TEACHER SCHOOL

- 1 dirt play court 50 ft. by 120 ft., banked up and well drained
- 1 horizontal bar for chinning
- 1 set of high jump standards
- 1 sand garden
- 3 swings
- 1 "take off" board for broad jump (8 inches wide and flush with the ground)
- 1 rope or plow line—at least 12 ft. long
- 1 target 15 inches by 24 inches (wood or canvas)
- 1 volley ball
- 1 volley ball net
- 2 small rubber balls
- 2 large rubber balls
- 4 playground baseballs (12 inch outseam)
- 2 playground baseball bats
- 1 set of horseshoes
- 12 bean bags (4 in. by 6 in.)
- 1 tape line
- 1 balancing rail 12 feet long (made of a piece of 2 x 4 set on 2 inch side, braced to at least 3 cross pieces to serve as a base)

Recommended:

- 1 soccer ball
- 1 phonograph and records

II. TWO AND THREE TEACHER SCHOOL

- 1 dirt play court 50 ft. by 120 ft., banked up and well drained
- 2 horizontal bars for chinning
- 1 set of high jump standards
- 1 sand garden
- 4 swings
- 1 rope or plow line at least 12 feet long

- 1 "take off" board for broad jump (8 inches wide and flush with the ground)
- 1 target 15 inches by 24 inches (wood or canvas)
- 1 volley ball
- 1 volley ball net
- 3 small rubber balls
- 3 large rubber balls
- 6 playground baseballs (12 inch outseam)
- 3 playground baseball bats
- 1 set of horseshoes
- 1 soccer ball
- 1 basket ball (outdoor)
- 12 bean bags (4 inches by 6 inches)
- 1 tape line
- 1 balancing rail 12 feet long (made of a piece of 2 x 4 set on 2 inch side, braced to at least 3 cross pieces to serve as a base)

Recommended:

The play court to be surfaced

1 pair of basket ball goals

1 phonograph and records

III. FOUR TO EIGHT TEACHER SCHOOLS

- 1 play court 50 ft. by 120 ft. surfaced
- 2 horizontal bars for chinning
- 1 set of high jump standards
- 1 sand garden
- 4 swings
- 1 "take off" board for broad jump (8 inches wide and flush with ground)
- 1 rope or plow line at least 12 feet long
- 1 target 15 inches by 24 inches (wood or canvas)
- 1 pair of basket ball goals
- 1 volley ball
- 1 volley ball net
- 3 small rubber balls
- 3 large rubber balls
- 8 playground baseballs (12 inch outseam)
- 4 playground baseball bats
- 1 set of horseshoes
- 12 bean bags (4 inches by 6 inches)
- 2 basket balls (outdoor)
- 1 soccer ball

- 1 football
- 2 tennis racquets (fair quality)
- 6 tennis balls
- 1 phonograph and records
- 1 tape line
- 1 balancing rail 12 feet long (made of a piece of 2 x 4 set on 2 inch side, braced to at least 3 cross pieces to serve as a base)

Recommended:

- 1 play shed or gymnasium at least 40 ft. by 70 ft.; dressing rooms and showers with hot and cold water for boys and for girls.

Summary. In planning a program of physical education it is essential to have a clear understanding of its values, scope, and purposes. It is necessary that each teacher plan his instructional program carefully in order that satisfactory results may be achieved. A course of study covering the work of each grade or group for the entire school year should be used by each teacher.

The activities of the physical education program include aquatics, combatives, gymnastics, individual sports, rhythmic, games, and outing activities. The physical education periods which should be included in a complete program are the instructional periods, participation periods, relaxation periods, and recess periods. The minimum time allotment for the instructional periods should be five periods each week of thirty minutes each in the elementary schools and five sixty-minute periods each week in the high schools. The classes in both elementary schools and high schools should preferably include not more than forty pupils each. Classes of seventy-five are the maximum size where any teaching can be attempted by the teacher. If classes have more than seventy-five pupils the teacher of necessity becomes merely an organizer and director instead of a teacher.

In elementary schools it is common practice for the regular classroom teachers to teach physical education. In most cities these teachers are assisted by supervisors of physical education. In high schools the classes in physical education are usually taught by men and women who are specialists in this field. A teaching load for each teacher of not more than twenty-five instructional periods a week and ten periods for conferences and supervision of after-school participation is believed to be a satisfactory standard.

It has been found that better programs of physical education are followed and better teaching results where supervisors are employed. There should be at least one supervisor of physical education for

each one hundred elementary school teachers employed in a school system. Supervisors should function as service agencies to the principals and teachers, and not as officers of administration. Several states have published definite standards for judging a program of physical education. The most comprehensive work of this kind has been done by the California State Department of Education. The high schools in some states give credit toward high school graduation and college entrance for work in physical education if carried on in schools which conform to certain minimum standards in regard to program, staff, and facilities.

The facilities needed for physical education include playing fields, tennis courts, and baseball diamonds; gymnasiums, play sheds, handball courts, squash courts, locker rooms, shower rooms, and swimming pools; and a variety of supplies and equipment such as balls, bats, nets, and gymnasium apparatus.

QUESTIONS

1. Why is it necessary that a program of physical education be well planned?
2. In what ways should a course of study be of help to teachers?
3. What types of activities should be included in a program of physical education?
4. What kinds of periods should be provided in a complete program of physical education? How should each type of period be used?
5. What should be the minimum time allotment for physical education at the different school levels?
6. What should be the size of physical education classes and the teaching load of physical education teachers at the various school levels?
7. What should be some of the functions of a supervisor of physical education?
8. What standards for a high school program of physical education have been proposed by the State Department of Education in Ohio?
9. What personnel should be provided to teach and supervise physical education in schools of various sizes?
10. What standards should be observed in regard to buildings, outdoor courts, and play fields for physical education in schools of different sizes?

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CHAPTER IX

THE CONTENT OF THE PHYSICAL EDUCATION PROGRAM

The elementary school program. The physical education activities which are suitable for the first three grades of the elementary school are singing games, fundamental rhythms, group games, athletic events, story plays, swimming, and outings. The content of the program for the fourth, fifth, and sixth grades should include rhythms, group games and relays, stunts and contests, team games and skills, athletic events, swimming, and outings. Children in all the grades of the elementary school who have poor posture or other defects that a well qualified physician believes can be helped by exercises, should be placed in an individual gymnastics class. The program of this special class should be planned so as to meet specifically the needs of each individual child.

An outline of a program by grades for the elementary school is given in the Alabama State Course of Study in six tables, one of which is reproduced on page 155. This outline is suggestive of what can be done in elementary schools where the classroom teachers are responsible for teaching physical education with a minimum of expert supervisory assistance or with no help at all. No teacher should make the mistake of concluding that these tables constitute a satisfactory course of study. They merely illustrate a method that can be used to show in tabular form the activities for each month. Some courses of study contain tables of this kind which show the activities to be taught each day of every week during the school year. A program prescribed in such detail is probably not of much practical use to teachers in most schools.

The program for noon and recess periods. In both elementary schools and high schools definite plans should be made for an activity program during noon and recess periods. On days when weather conditions will permit the maximum use should be made of the playgrounds in order that many activities might be conducted out-of-doors. Often, where there is a physical education teacher in a school, he is made chairman of the committee to plan a program that will permit the largest number of children to participate. This involves the preparation of schedules so that the playgrounds, play courts,

GRADE THREE

(Ages 8-9)

<i>Month</i>	<i>Singing Games</i>	<i>Fundamental Rhythms</i>	<i>Group Games</i>	<i>Athletic Events</i>	<i>Stunts</i>	<i>Outings</i>	<i>Related Activities</i>
<i>Sept.</i>	On the Bridge of Avignon	Marching (Marche Lorraine)	Hop Scotch	Broad Jumping	Crab Walk	Hike	Hiking
<i>Oct.</i>	Roman Soldiers		Pinch-O	Rope Jumping.	Stiff Leg Bend		
<i>Nov.</i>	Rig-a-jig-jig		Hill Dill	Balancing	Wheelbarrow		
<i>Dec.</i>	Captain Jinks		Simple Dodge Ball	Ball Bouncing and Catching	Cartwheel	Party	Swimming
<i>Jan.</i>	Pop Goes the Weasel	Clapping 4/4 rhythm	Boiler Burst	Hopping	Front Somersault		
<i>Feb.</i>	Muffin Man	Rhythmic Bouncing Throwing and Catching	Black Tom	Circle Target Throwing	Corkscrew		
<i>March</i>	Indian Dance		Circle Club Bowls	High Jumping	Full Squat	Picnic	Skating
<i>April</i>	Little Pony		Japanese Tag	Climbing	Front Somersault		
<i>May</i>	Hansel and Gretel		Beater Goes Round		Dog Run		

THE SIX-YEAR CURRICULUM FOR BOYS

Grade	VII	VIII	IX	X	XI	XII	Not Suitable in Most Schools
ALL YEAR	Clogging—tap Games—low org. Giant volleyball Hiking Life-saving Marching Ping Pong Swimming Tumbling Volley ball Apparatus	Clogging—tap Games—low org. Giant volleyball Hiking Life-saving Marching Ping Pong Swimming Tumbling Volley ball Apparatus	Clogging—tap Hockey Giant volleyball Gymn. dancing Handball Hiking Life-saving Marching Ping Pong Social dancing Swimming Tumbling Volley ball Apparatus	Clogging—tap Hockey Giant volleyball Gymn. dancing Handball Hiking Life-saving Marching Ping Pong Social dancing Swimming Tumbling Volley ball Apparatus	Clogging—tap Hockey Giant volleyball Gymn. dancing Handball Hiking Life-saving Ping Pong Social dancing Swimming Tumbling Volley ball Apparatus	Clogging—tap Hockey Giant volleyball Gymn. dancing Handball Hiking Life-saving Ping Pong Social dancing Swimming Tumbling Volley ball Apparatus	Aesthetic Dancing Badminton Ballet Fencing Fishing Hunting Ice hockey La Crosse Miniature golf Rowing Rugby Squash
FALL ONLY	Soccer Speedball Touch football	Soccer Speedball Touch football	Archery Speedball Touch football	Archery Football Golf Soccer Speedball Touch football	Archery Football Golf Soccer Speedball Touch football Riding	Archery Football Golf Soccer Speedball Touch football Riding	
WINTER ONLY	Touch football Winter sports	Touch football Winter sports	Boxing Basketball Touch football Winter sports Wrestling	Boxing Bowling Basketball Touch football Wrestling Winter polo Winter sports	Bowling Boxing Basketball Touch football Wrestling Winter polo Winter sports	Bowling Boxing Basketball Touch football Wrestling Winter sports Water polo	
SPRING ONLY	Horseshoes Marbles Baseball—hard Baseball—soft Speedball Tennis Track	Horseshoes Marbles Baseball—hard Baseball—soft Speedball Tennis Track	Archery Horseshoes Baseball—hard Baseball—soft Speedball Tennis Track	Golf Archery Baseball—hard Baseball—soft Speedball Tennis Track	Golf Archery Baseball—hard Baseball—soft Speedball Tennis Track Riding	Golf Archery Baseball—hard Baseball—soft Speedball Tennis Track Riding	

THE SIX-YEAR CURRICULUM FOR GIRLS

Grade	VII	VIII	IX	X	XI	XII	Not Suitable in Most Schools
ALL YEAR	Clogging—tap Folk dancing Games—low org. Giant volleyball Hiking Life-saving Marching Natural dancing Pagantry Ping Pong Baseball—soft Swimming Tumbling Volley ball Handball	Clogging—tap Folk dancing Games—low org. Giant volleyball Hiking Life-saving Marching Natural dancing Pagantry Ping Pong Baseball—soft Social dancing Swimming Tumbling Volley ball Handball	Clogging—tap Folk dancing Games—low org. Giant volleyball Hiking Life-saving Marching Natural dancing Pagantry Ping Pong Baseball—soft Social dancing Swimming Tenikott Volley ball	Clogging—tap Folk dancing Giant volleyball Gymn. dancing Handball Hiking Life-saving Marching Natural dancing Volley ball Pagantry Ping Pong Baseball—soft Social dancing Swimming Tenikott Tumbling	Clogging—tap Folk dancing Giant volleyball Gymn. dancing Handball Hiking Life-saving Marching Natural dancing Volley ball Pagantry Ping Pong Baseball—soft Social dancing Swimming Tenikott Tumbling	Clogging—tap Folk dancing Giant volleyball Gymn. dancing Handball Hiking Life-saving Marching Natural dancing Volley ball Pagantry Ping Pong Baseball—soft Social dancing Swimming Tenikott Tumbling	Aesthetic dancing Football Badminton Ballet Boys' basketball Boxing Fencing Fishing Heavy apparatus Hunting Ice hockey Ice cream Marbles Miniature golf Baseball—hard Rowing Rugby Squash Touch football Wrestling
	Soccer	Soccer	Soccer Speedball	Golf Soccer Speedball	Golf Riding Soccer Speedball	Golf Riding Soccer Speedball	
WINTER ONLY	Winter sports	Winter sports	Basketball Winter sports	Basketball Danish gym. Winter sports Water Polo	Basketball Danish gym. Winter sports Water Polo	Basketball Bowling Danish gym. Winter sports Water Polo	
SPRING ONLY	Horseshoes Tennis Track	Horseshoes Tennis Track	Archery Horseshoes Tennis Track	Archery Golf Horseshoes Tennis Track	Archery Golf Horseshoes Tennis Track Riding	Archery Golf Horseshoes Tennis Track Riding	

equipment, supplies, and other facilities may be used to the maximum capacity. Some of the activities that may be used during the noon periods are group games, team games, individual games, social games, skill test events, and dancing.

The high school program. A tabular outline of a physical education program for boys and girls in junior and senior high schools is reproduced on pages 156-157. These tables were taken from the Ohio State Course of Study in Health and Physical Education for Junior and Senior High Schools.¹

The college program. The aim of physical education in college should conform to the aim of all education. The specific objectives and goals should be stated in terms of the interests, needs, and abilities of boys and girls of college age. The status of each individual should be determined by the use of as complete a battery of tests as it is practicable to give. The program of activities offered should be arranged to meet the needs of each student as revealed by the results of these tests.

A physical education program in a college should include appraisal and diagnostic procedures such as a medical examination, motor ability tests, and achievement tests; physical education classes to meet the needs of normal students; adjustment classes to meet the needs of atypical students; ample opportunities for all students to participate in intramural athletic competition and recreational sports; and intercollegiate competition for men.

The college program for women. The content of the physical education program for college women should include the diagnostic and appraisal procedures necessary to determine the needs of each student. Opportunities should then be provided for each individual to participate in activities suited to her interests and needs. The provision of such opportunities make necessary classes in individual gymnastics; in recreational sports such as archery and quoits which require mild activity; in major sports such as basketball and hockey which require vigorous activity; in strenuous recreational sports, such as tennis and handball; and, in swimming and water sports. The program should also provide for outing activities such as horseback riding, skating, and camping.

The college program for men. An unpublished study, by R. J. Kutler of Kenyon College, of the physical education programs for men in a group of colleges which are recognized as having good programs of physical education, arrived at the following conclusions:

¹ Delbert Obersteuffer, *A Program for Junior and Senior High Schools*, pp. 57-59. Health and Physical Education Series of the State of Ohio, Department of Education, Vol. III. Columbus, Ohio: State Department of Education, 1932.

1. That medical examinations are given in most cases.
2. That sectioning is done to a certain extent through the results of the medical examinations.
3. That special classes are provided for men who are physically unfit to take part in a regular physical education program.
4. That corrective work is given to men who show particular bodily defects.
5. That a physical education requirement is universal, running from one to three years.
6. That most schools still require some formal work.
7. That most schools emphasize the natural program.
8. That exercises and games that will benefit the student after he is out of college as well as while he is in college are encouraged.
9. That in most cases guidance through regular coaches is afforded in most sports.
10. That in most cases sectioning is done according to achievement and previous experience.
11. That varsity competition counts towards attendance in regular physical education class work.
12. That most schools not only encourage but insist on a free election of sports for detailed study.
13. That the final grade in most cases is based on achievement, attendance, and spirit.
14. That in most cases credit is given towards graduation.

At the University of California¹ physical education is required of all men students for the first two years. Each student is permitted to elect any of nineteen different activities that he wishes after he has been passed by the medical authorities and has passed the physical efficiency tests. These tests are designed to test agility, skill in self-defense, and skill in swimming. To pass the agility test a man must be able to run at least a hundred yards in thirteen and one-fifth seconds, to broad-jump fourteen feet, to hand-vault over a fence shoulder high, to climb a twelve-foot rope hand over hand and grasp the top of the twelve-foot fence from which it hangs and drag himself to the platform on the opposite side in a maximum of twenty-five seconds, and finally be able to lunge headlong over an obstacle three feet high and land on hands or shoulders and roll to the feet with fair skill. The self-defense tests call for ability in boxing and wrestling with emphasis on poise, determination, and self-control in these sports. The swimming tests determine a man's ability in speed and distance swimming and in the technique of rescue and resuscitation of a person in danger of drowning.

Men who fail to pass any of these tests are assigned to classes

¹ Frank Kleeberger, "Physical Education of University Men," *School and Society*, XXXII (November 15, 1930), 1-9.

where they are given help in correcting their deficiencies. They are required to attend these classes until they are able to pass the efficiency tests and thereby become eligible to elect any activity.

The University of Oregon provides another illustration of a well-organized physical education program for men. Here all students are required to take physical education for two years. Upon entrance to the University each student is placed in class A, B, C, or D according to his physical fitness as determined by a medical examination. Students in classes A and B are permitted to try for any of the varsity athletic teams and may substitute participation on these teams for regular class attendance during the period of actual practice with the varsity squad. Students in classes C and D are not permitted to try for any athletic team without permission from the University Health Service and the instructor in charge of the Restricted Exercise Group. They are required to register for Restricted Exercise sections, in which activities suited to their needs are provided.

Students who are placed in classes A and B are required to register for instruction in regular physical education class sections. These sections offer instruction in a variety of activities and any student may choose any activity he wishes. He must, however, make his selection in such a way that by the end of his sophomore year he will have completed the following requirements:

1. He must pass the swimming test.
2. He must pass the hygiene course.
3. He must have three different sports on his program.
4. He must have at least two terms of some one sport.
5. He must participate in physical education for at least six terms.

Intramural participation. In every school from the one-teacher rural school to the large university there should be provided an opportunity for all the pupils to participate in intramural athletics. By the term "intramural athletics" is meant athletics carried on within any one school. It does not involve competition between teams representing different schools. In the situations where such opportunities have been provided it has been found that from 60 to 80 per cent of the entire student body will take part in some form of athletics.

Organization of intramural athletics. The first step in organizing an intramural program should be to state clearly the objectives of the program. After the objectives are understood the selection of activities to be included in the program should be made, and then the necessary techniques of organization and administration should be chosen. The general objectives of intramural athletics should be

the same as the ones for all physical education. The statements of the specific objectives usually stress the wholesome use of leisure, the preparation for leisure later in life, the hygienic value of wholesome play, the opportunities for self-expression through joyous participation in play activities, and the social values of playing with others.

It has been found to be desirable to have some faculty member designated as adviser in intramural athletics. In large high schools and colleges this should be a full-time position. In smaller high schools and colleges the adviser in intramural athletics may be a coach or a gymnasium instructor, who combines his intramural work with his other responsibilities. In all situations it is important to have a system of student managers who should assume much of the responsibility for carrying out the program.

A committee of the Michigan High School Athletic Association¹ suggested that the units of organization in a high school might be some of the following: (a) squads in gymnasium classes, (b) home-room, (c) house, (d) study hall, (e) one-half class, such as 10B-10A-11B, or complete class, such as 9-10-11-12, (f) clubs, (g) courses or curriculums—this is particularly suitable for technical schools, and (h) "color" groups.

In the University High School at the University of Michigan when a boy or girl first enrolls in the school he or she is assigned to either the Purple Club or the Gold Club. Purple and gold are the school colors. Each pupil remains a member of this same color club during his entire high school career and usually develops a high type of loyalty to his club. Most of the physical education class work, field meets, play days, and intramural competition are organized on the basis of these color clubs. There are several teams organized in each color club which have distinctive names, such as the Gold Giants and the Purple Bears. These teams within each club have been organized by the captains of the teams choosing the players for their teams. This plan of organizing teams could be greatly improved by classifying the boys within each color club on the basis of age, height, and weight, as described by McCloy.²

Some of the periods which may be used for intramural athletics include afterschool periods, gymnasium periods, Saturday mornings, free periods during the day, and noon periods. The program for the noon periods should not include strenuous activities.

Intramural awards. It is generally conceded to be unwise to give individual awards in connection with intramural athletics. It has

¹ Michigan High School Athletic Association Bulletin, Intramural Activities Number, VIII (April, 1932), 254-68

² Charles Harold McCloy, *The Measurement of Athletic Power*, p. 95. New York: A. S. Barnes and Company, 1932.

been found to be a good plan, however, to have cups, banners, or plaques which may be awarded to the group or unit that wins the championship in each sport. A common practice in connection with programs of intramural athletics is to have a point system and to give some award to the group or unit which wins the most points in all the different activities throughout a season or a year. This encourages the different groups to place entries in all the events included in the program.

Safeguarding intramural competition. Safeguarding the competition in intramural athletics is an essential part of the administration of the program. Every individual should be required to have a complete medical examination before he is permitted to compete. American football should not be sponsored as an intramural sport unless the players can be completely equipped and expert coaching and supervision provided. Preliminary training and conditioning should be a prerequisite for participation in strenuous activities. In junior and senior high schools and in elementary schools pupils should be classified into homogeneous groups for purposes of competition.

Activities of intramural programs. The following events have been suggested as suitable for use in high schools by the Michigan High School Athletic Association.

SENIOR HIGH SCHOOL BOYS

<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Archery	Badminton	Archery
Cross country	Basketball	Baseball
Football	Bowling	Golf horseshoes
Football field meet	Boxing	Playground ball
Golf	Foul shooting	Swimming
Horseshoes	Gymnastics	Tennis
Playground ball	Handball	Track activities
Soccer	Ice hockey	Volley ball
Speedball	Ping pong	
Swimming	Relay carnivals	
Tennis	Shuffle board	
Touch football	Skating	
Volley ball	Skiing	
	Swimming	
	Track activities	
	Twenty-one	
	Water polo	
	Wrestling	

SENIOR HIGH SCHOOL GIRLS

<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Archery	Archery	Archery
Deck tennis	Badminton	Deck tennis
Fieldball	Basketball	Fieldball
Field hockey	Bowling	Field hockey
Golf	Deck tennis	Golf
Handball	Fencing	Handball
Horseshoes or quoits	Foul shooting	Horseshoes or quoits
Newcomb	Handball	Hurdles 17"-24"
Playground ball	Ping Pong	Newcomb
Soccer	Quoits	Playground ball
Speedball	Shuffle-board	Sixty-yard dash
Swimming	Skating	Soccer
Tennis	Skiing	Speedball
Volley ball	Stunts	Swimming
	Swimming	Tennis
	Twenty-one	Volley ball

JUNIOR HIGH SCHOOL BOYS

<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Archery	Basketball	Archery
Golf	Boxing	Field ball
Horseshoes	Foul shooting	Golf
Playground ball	Gymnastics	Hit pin ball
Soccer	Handball	Horseshoes or quoits
Speedball	Ice hockey	Newcomb
Swimming	Ping Pong	Swimming
Tennis	Shuffle-board	Tennis
Touch football	Skating	Track activities
Volley ball	Swimming	Volley ball
	Twenty-one	
	Wrestling	

JUNIOR HIGH SCHOOL GIRLS

<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Archery	Archery	Archery
Field ball	Basketball	Field ball
Golf	Foul shooting	Fifty-yard dash
Hat pin ball	Newcomb	Golf
Horseshoes or quoits	Ping Pong	Hit pin ball
Kick ball	Quoits	Horseshoes or quoits
Kick pin ball	Shuffle-board	Kick ball
Newcomb	Skating	Kick pin ball
Paddle tennis	Skiing	Newcomb
Schlag ball	Swimming	Paddle tennis
Swimming	Twenty-one	Schlag ball
Tennis	Volley ball	Swimming
Volley ball		Tennis
		Volley ball

Summary. The activities which are suitable for the physical education program of the first three grades are singing games, fundamental rhythms, group games, athletic events, story plays, swimming, and outings. In the fourth, fifth and sixth grades the programs should include rhythms, group games and relays, stunts and contests, team games and skills, athletic events, swimming, and outings. Individual gymnastics should be provided where possible for all children who can be benefited by such instruction in both elementary schools and high schools. The activities in the high school program of physical education should be arranged according to appropriate seasons and graded according to abilities, interests, and needs of the pupils.

In colleges the status of each student should be determined by as complete a battery of examinations and tests as it is practicable to give. The program for each student should be based largely on his needs as revealed by the results of the tests.

Opportunities for participation in intramural athletics should be provided in all schools from the one-teacher rural school to the large university. A statement of objectives, the selection of the activities in terms of the objectives, and the organization of the competitive program are three problems that must be solved in each situation in connection with intramural athletics.

QUESTIONS

1. What types of activities are suitable for the physical education program in the different grades in a school?
2. How may a program be shown in tabular form?

3. In what way should physical education contribute to the noon and recess periods in a school?
4. Fundamentally, what determines a college program of physical education?
5. What data should supply the basis on which to plan a college program of physical education?
6. What types of activities should be included in a college program of physical education for women?
7. What is included in the physical education program for men at the University of California and at the University of Oregon?
8. What are the steps in the organization of a program of intramural athletics?
9. What are some of the units of organization for a program of intramural athletics in a high school?
10. What events may be included in a senior high school program of intramural athletics for each season for boys and girls?

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CHAPTER X

FOUNDATION OF METHOD IN PHYSICAL EDUCATION

The importance of method. Method in physical education is the technique or procedure used by a teacher to direct and control the experiences of pupils in an effort to make desirable changes in them. Every field of human endeavor requires of its practitioners that, to be successful and well qualified, they have skill and a knowledge of the materials and tools peculiar to each field, and also, that they be able to apply appropriate methods of using the materials and tools. This fact is commonly observed and universally recognized by all people in their daily contacts with physicians, surgeons, dentists, brick-masons, farmers, mechanics, nurses, ministers, salesmen, and all other workers. Obviously no mere knowledge of anatomy, physiology, bacteriology, chemistry, and the other sciences would make a person a skilled surgeon or dentist. Nor can we expect a knowledge of physics to make an individual a good automobile mechanic, or a knowledge of economics to make a successful salesman.

There are many subject-matter enthusiasts, however, who believe that any study of teaching methods is largely a waste of time. They usually insist that, if a person knows the subject matter of any field, he is thoroughly qualified to teach it. Some members of this group admit that it is desirable for a teacher to know something of the nature of children in addition to the subject matter to be taught, but think that each teacher will intuitively use the best methods of teaching. The error of this point of view is clearly recognized by competent students of the problems of education, and nearly every state in the United States now requires professional as well as academic training of all public school teachers.

A teacher of physical education should make every effort to master the principles underlying good methods of teaching. This task will require continuous study, thought, and observation, because method is not static. The method which might be good at one time with one group of pupils in a given situation might not be desirable later in a different situation. The entire field of professional education, including physical education, is making such rapid progress and is changing so constantly that teachers must study continually in order to receive the benefit of contemporary educational philosophy and research.

Relation of method to sound principles. In teaching we are concerned with changing boys and girls from what they naturally are into the individuals that we hope to develop by means of education. In order to carry on this process successfully it is necessary that we know the kind of person that education has set up as its objective to achieve, the nature of the material with which we have to work, and the methods of procedure that will most effectively change this material into the finished product which is desired. In preceding chapters we have discussed some of the characteristics of children and have presented the aims and objectives of physical education. In this chapter an effort is made to present other facts concerning the nature of children, and some of the methods that may be used in physical education to bring about desirable changes in boys and girls with the greatest economy of time and effort and with minimum of ill effects on the pupils. In choosing the methods to be used in teaching physical education in any situation it is essential to recognize and use the pertinent scientific data from the fields of education, psychology, physiology, hygiene, anatomy, and sociology.

Need for a knowledge of child nature. The modern conception of physical education recognizes the biological development of the child and the valuable contribution that motor activity can make in the educational process. Present day students of children and of child nature appreciate the fact that educational programs should be set up and carried out in the light of the developmental needs of each child. The emphasis on knowing the nature and needs of children should permeate the thinking and work of all persons in physical education, from the professional undergraduate students in teacher-training institutions to the most important and prominent research workers, administrators, and teachers. Recognition must be given to the important contributions that biology, physiology, chemistry, physics, anatomy, sociology, psychology, and education can make toward an understanding of the children who are being educated.

A great deal is being written and said about the importance of teachers knowing well the subject matter which they are expected to teach, and no doubt it is essential for teachers to be masters of their various subjects. It is important for teachers to know subject matter, but it is even more important for them to understand how children come to be as they are and how they live, learn, think, grow, develop, and are affected by various emotional, intellectual, and physical influences.

It would prove helpful to every teacher to have a clear-cut conception of the teachings of organic evolution in their relation to the education of children. Certainly all teachers would have a clearer

conception of child nature if they knew the stages of animal development from protozoa to man, the organs and systems as they developed, and the relationships that exist between all of them. Particular attention should be given to the development of the muscular and nervous systems and their relationships because it is true, as Tyler¹ has pointed out, that

Heart, lungs, and kidneys owe their development and present power to the demands and stimuli of the muscular system; and these stimuli greatly increase the efficiency of our digestive and assimilative tissues. It was sensation and motion, not thought and learning, which laid the foundations of the brain, and stimulated the development of all its centers. Our internal organs can and will respond to all reasonable demands of our muscular system. It is an inherited habit. They require these customary motor stimuli to maintain them in their best condition. Without them, as in sedentary life, they degenerate and invite, if they do not produce, disease.

The age periods of children. At different age levels the play interests of children are different. It is most important that those who are concerned in providing leadership for the play and recreation of children, understand the physical, mental, and social characteristics of the different periods and the chief types of play that appeal to the child at the various stages through which he passes.

In attempting to divide the child's life into age-periods it is important to keep in mind that abrupt changes do not take place at any one age. There is considerable overlapping in these periods of transition. The division of the life of the child into age-periods is largely arbitrary but such a classification is helpful in choosing activities that are most suitable for children at various levels of development.

A classification of the age-periods of the child has been made by Joseph Lee² as follows:

1. First three years—period of babyhood when the child's life is largely in his relation to his mother; creative impulse begins to manifest itself in this period.

2. Three to six—age of impersonation; impulse to impersonate colors almost all the child's activities; main lines of growth in this period are along the lines of fighting, nurture, rhythm, creation, curiosity, and social membership.

3. Six to eleven—"Big Injun" or age of self-assertion, dominated largely by the fighting instinct, though the chasing, nurturing, and other instincts are strong.

¹ John Mason Tyler, *Growth and Education*, p. 11. Boston: Houghton Mifflin Company, 1907.

² National Recreation Association. *The Normal Course in Play*, p. 71. New York: A. S. Barnes and Company, 1926.

4. Eleven to fourteen—age of loyalty; the belonging instinct is strong; it is the age when gangs flourish.
5. Fourteen to twenty-one—apprentice age.

McDougall has distinguished four levels of conduct, each of which must be traversed by every individual before he can attain to the next higher stage. It is probable that these levels of conduct correspond roughly to the last four age groups as suggested by Lee. These stages¹ are (1) "the stage of instinctive behavior modified only by the influence of the pains and pleasures that are incidentally experienced in the course of instinctive activities; (2) the stage in which the operation of the instinctive impulses is modified by the influence of rewards and punishments administered more or less systematically by the social environment; (3) the stage in which conduct is controlled in the main by the anticipation of social praise and blame; (4) the highest stage, in which conduct is regulated by an ideal of conduct that enables a man to act in the way that seems to him right regardless of the praise or blame of his immediate social environment."

Why children play. Since the children of all races and nationalities, both savage and civilized, play naturally and in much the same manner, much speculation has taken place as to why children play.

A number of different theories have been promulgated to explain this universal characteristic of children. Among these theories are the Spencer-Schiller theory, the Karl Gross theory, and the recapitulation theory of G. Stanley Hall.

The Spencer-Schiller Theory. The Spencer-Schiller theory explained play as an expression of surplus energy. It was believed that the child does not expend all his energy in living and growing, and the unused amount is worked off in play. This explanation of play is quite acceptable to those who have a selfish interest in child labor, their point of view being that since play is mere excess energy it might as well be released through productive work as through play. The criticism that has been directed at this theory points out that if play were the mere expression of surplus energy it would be much the same in all species. The actual facts about play are that although the play forms of individuals of the same species are much the same there is little similarity in the play of different species.

The Gross Theory. The Gross theory of play attempts to make up for the deficiency of the Spencer-Schiller theory and to explain the reason for the play forms of various species. Gross believed that play is the result of certain instincts that appear for the purpose of preparing children through play for the pursuits that they must follow

¹ William McDougall, *An Introduction to Social Psychology*, p. 181. Boston: John W. Luce and Company, 1915 (9th ed.).

later. He pointed out that play is the expression of certain instincts that are prominent at different stages in the child's life. If these instincts find an opportunity for expression, habits are formed, and the character and personality of the individual are advanced. If there is no opportunity through play for the expression of these instincts, no habits are formed and the education of the child is deficient to that extent. Gross pointed out that a well-rounded play life is therefore essential in the education of children. The critics of this theory point out that it assumes that instincts can look forward to the occupation the child will carry on after he is grown.

The Recapitulation Theory. G. Stanley Hall advanced the theory that a child in his development goes through the same steps and stages that the human race went through in its evolutionary development. This theory would explain the play of children digging caves, for example, as the individual living again the experiences of the race when mankind lived in caves. This theory does not explain why children are so fond of playing with trains and airplanes, since man had no experiences with these machines during his evolutionary development.

These and other theories have been advanced to explain the cause of play. No one theory alone explains satisfactorily why children play but each of these theories is of help to us in understanding the nature and needs of boys and girls in regard to play.

The fallacy of considering any one method the best. There is no one best method of teaching all activities. From discussions of "methods of teaching" one may get the impression that there is or should be one best method, which is applicable to all teaching. Actually, however, the method should vary as the situation, content, and previous experiences of the pupils vary. The method of teaching is determined to a great degree by the outcomes sought. Persons who are interested in developing aggressiveness, initiative, and ability in constructive thinking would favor a type of method that is different from the type advocated by those who seek the development of docility, conformity, and submissiveness.¹

There are several methods that have come to be more or less widely used in teaching. These may be known as "pouring-in method," "the play method," "the project method," "the big-unit method," and the "activity method."

The pouring-in method. The pouring-in method is the procedure traditionally used when the teacher tells the pupils what they should know with the expectation that this will make some modification for

¹ Jesse Feiring Williams, John I. Dambach, and Norma Schwendener, *Methods in Physical Education*, p. 21. Philadelphia: W. B. Saunders Company, 1932.

the better in their behavior. It is the path of least resistance in teaching and is still followed by many teachers because, as we all know, "pouring is easier than pumping."

The play method. The play method involves the attempt to teach the things that adults believe children should know by camouflaging the things to be learned so that they will have the appearance of a game. A great variety of so-called English games, arithmetic games, and games in other subjects have been used. One rather well-known book on camping and recreational activities advocates the use of the game method for enticing children to learn things that they do not naturally want to learn. This unnatural and artificial way of attempting to fool children into learning things is unsound.

Most of the things that adults try to teach children by this "game method" are entirely foreign to a game and have no meaning to the pupils in relation to the game. Children should acquire knowledge and skills in situations as nearly as possible like those of real life outside of school, rather than in an artificial game situation. It is no wonder that some pupils develop an attitude antagonistic to play, since many of their notions of games have been gained from silly arithmetic and English games.

The project method. The project method emphasizes the fact that people should learn things in the way in which they are to function in real life. An illustration of teaching by the project method would be for a scout troop to build a boat. The building of this boat would be of real interest to the boys and everything that they learned in connection with it would have real meaning for them. Not only would they develop some additional skill in the use of tools but they would learn a great deal that is ordinarily called mathematics, history, geography, physics and commercial work. It is also quite likely that they would develop interests and curiosities that would lead them to do considerable study and thinking along lines that are not directly concerned in building a boat. This would be an instance of what Kilpatrick has called "activity leading to further activity."

The big-unit method. The big-unit method is an effort to teach human knowledge in large units of related material rather than breaking up our store of human knowledge into small segments and calling these segments "subjects."

The activity method. The activity method emphasizes much the same ideas as do the project and big-unit methods in that all learning takes place as the result of the activity of the learner. No amount of activity on the part of the teacher or the leader will result in any learning on the part of the pupil except as it stimulates him to increased activity. When we use the term "activity" we do not mean

exclusively physical activity; there are also intellectual and emotional activities. There is some evidence, however, to support the belief that a child learns more through his motor activities than he does through the avenues of all five of the senses.

Principles of psychology involved in method. In order to choose the most appropriate methods of teaching it is necessary that teachers be familiar with the more common and applicable principles of educational psychology. Some of these important principles are suggested in the following statements. These principles will be discussed at greater length in connection with the methods of securing efficient learning.

1. Learning is a process of experiencing, of reacting to situations.
2. Reactions to situations are what we learn. One learns to react to a baseball coming toward him, to a football in the air, to hurdles on the track, to the basketball basket on the backboard, to an opponent dribbling a ball down the floor, and to an innumerable number of other specific situations.
3. All learning has a neural basis.
4. Activity on the part of the learner is necessary if learning is to take place. Activity is stimulated by a want or desire on the part of the learner.
5. Interest is the best motivation for learning. Interest is the result of the wants or desires.
6. There are innate or inborn tendencies in each individual which make participation in physical activities satisfying.
7. If material is to be learned efficiently by pupils, it must be within the range of the experience and abilities of the pupils.
8. Learning takes place most effectively when an individual practices regularly an activity he wishes to learn, and the practice of which results in pleasure and satisfaction to him.
9. Individuals do not all learn at the same rate or in the same way. That is, learning curves are not all the same shape.
10. Speed and accuracy of performance usually go together.
11. A reaction will not transfer to all situations. It is likely to transfer to other situations which have a great deal in common with the original situation.

Physiological principles involved in method. There are some facts from the field of physiology which are of immediate interest to teachers in the discussion of methods in physical education. Every teacher should include in his program of professional preparation courses in biology and physiology. These courses should precede the work in psychology. A teacher whose preparation has not included work in these three fields is not best qualified to carry the responsibilities of teaching. In teaching physical education to a class, understanding of some physiological principles is fundamental to the use of good method. An effort has been made to point out these principles in the following statements:

1. The tonus of the muscles of the body influences to a considerable degree the posture of an individual. By the expression "muscle tonus" is meant the partial contraction of the muscles which exists at all times while we are awake. Tonus is dependent on impulses brought from the spinal cord. It is believed that the tonicity of the muscles is effected by one's mental attitude. That is, if one feels confident, happy, and secure he will have better muscle tonus than if he feels discouraged and downcast.

2. When a nerve fiber is stimulated the impulse carried by it is always the strongest of which it is capable. The strength of the stimulus does not influence the strength of the impulse carried by the nerve fiber. The same principle is also true in regard to any one muscle fiber. When any muscle fiber contracts it contracts to the fullest extent of which it is capable. This is known as the "all or none" phenomenon. It is believed, however, that if a motor nerve is feebly stimulated only a few of the nerve fibers carry the stimulus, and only a few of the muscle fibers are stimulated; a weak contraction of the entire muscle therefore results. If a complete and strong contraction of an entire muscle is desired a strong stimulus should be sent to the muscle over the motor nerve.

Physical education teachers should emphasize to their pupils the importance of consciously doing their best at all times during the practice of motor skills. This will probably increase the force of the nerve stimulus.

3. When a resting muscle begins contracting its irritability is increased by chemical changes occurring in the muscle as the result of activity. After a certain number of contractions, however, the power of the muscle to do work begins to decrease. Pupils in physical education classes and athletes on representative teams should participate in a moderate amount of "warming up" exercises before they enter vigorously into physical activities. It is important, however, that the "warming up" process not be so long or so strenuous as to tire the players.

4. As a result of the accumulation of waste products of fatigue and the exhaustion of the food which furnishes energy for muscular contractions, a muscle gradually loses its irritability and ability to do work. Exercise may be carried on so long that a muscle will utterly fail to respond to even the strongest stimulus. When pupils begin to show signs of intense fatigue they should be given a rest period. Some of the signs that should be watched for are loss of skill and muscular coördination, falling down while playing, drooping figure, breathlessness, and drawn face.

5. It is a generally accepted fact that a person who is trained

to do a particular kind of work can perform this work with a minimum expenditure of energy. It seems to be true, therefore, that pupils who have skill in an activity can participate in the activity longer with safety and pleasure than can pupils who are just learning the activity and do not have much skill.

6. The fatigue of any set of muscles is not confined exclusively to the particular muscles concerned but causes fatigue of some degree of all the muscles of the body.

7. Anything which tends to reduce the vitality of the body hastens the onset of fatigue. These factors include poor elimination of waste from the body, inadequate food, lack of sleep, irregular exercise, and living or working in poorly ventilated rooms. The observance of training rules is essential to good performance.

8. Muscle soreness is caused by the accumulation of the waste products of fatigue or by small tears in the muscle fibers or sarcolemma. (The sarcolemma is a connective tissue covering of the striated muscle cell.) When muscles are sore as the result of the accumulation of waste, the condition can be corrected by heat, gentle rubbing, and moderate exercise. In the case of tears in the muscle fiber or connective tissue, rest is to be recommended.

9. It is now generally believed that "second wind" is due to the coördinated adjustments of several mechanisms, and is not due entirely to the adjustment of the respiratory mechanism or any other single mechanism.¹ It has been found that, if exercise is begun slowly and worked up gradually to what is severe exertion for an individual, no experience of getting the "second wind" takes place. This failure is probably due to the fact that there is no initial acute breathlessness from which the condition known as "second wind" may develop. It has also been found that as an individual "hits his stride" there takes place a better adjustment between the nervous and muscular systems. This adjustment makes his muscular responses smoother and less clumsy and less energy is used in executing the movements. These facts emphasize the importance of permitting pupils to participate in vigorous activities only after a period of preliminary training. It is also indicated that during any one practice period or period of competition each participant should work up gradually to the point of intense effort.

10. Breathing is a natural physiological process and there is no evidence to indicate that people need to be taught to breathe. The rate of breathing is regulated automatically by the nervous system to meet the needs of the body for oxygen. There is no justification

¹ Adrian Gordon Gould and Joseph A. Dye, *Exercise and Its Physiology*, pp. 272-73. New York: A. S. Barnes and Company, 1932.

for "breathing exercises" as a routine part of the physical education program.¹

11. Smooth and harmonious movements of the body are secured by reciprocal innervation, which is a function performed by the nervous system in such a way that when a stimulus is sent to a muscle to contract, the antagonistic group of muscles is inhibited. For example, when the quadriceps is stimulated to extend the leg the antagonistic flexor group (hamstrings) is inhibited.²

Williams³ has pointed out that the so-called resistive exercises, in which a person is asked to hold the active and antagonistic muscles in a state of contraction, are in direct violation of this principle and are not physiological. He also emphasizes the fact that grace and skill in physical activities are dependent on the relaxation of antagonistic muscle groups. This fact is plainly illustrated in such activities as skating, golf, and tennis when beginners are stiff and awkward because they are contracting antagonistic muscle groups.

Principles of anatomy involved in method. An application of the knowledge of anatomy is an essential part of the foundations of method in teaching physical education. The following facts from anatomy are directly applicable:

1. The human foot is so constructed that the superimposed weight should be carried on the outside of the foot rather than on the inside. This fact indicates that the straight-foot position should be maintained.

2. The pelvis of the female is broader and shorter than that of the male.

3. The femur of the female joins the hip bone more obliquely than does that of the male.

4. The center of gravity of the body of the female is lower than that of the male.

5. The muscles of the male are stronger than those of the female. This is particularly true of the shoulder girdle.

6. The abdominal muscles play an important part in maintaining the abdominal viscera in place.

7. The equilibrium of the body involves muscular coördinations, the semicircular canals of the internal ear, the eyes, the receptors in the skin, and the nerve endings in muscles, and ligaments around joints.

8. It is a principle of bodily movement, which seems to be applied in most of the natural physical activities of humans, that opposite

¹ Jesse Feiring Williams, *The Principles of Physical Education*, pp. 118-21. Philadelphia: W. B. Saunders Company, 1927.

² Gould and Dye, *op. cit.*, p. 28.

³ *Op. cit.*, p. 122.

parts of the body are used in each activity in order to achieve smooth and well-coördinated movements. For example, in movements such as climbing, walking, running, and throwing, the arms and legs on opposite sides of the body are used in opposition. Methods of teaching motor skills which violate this principle should be scrutinized critically before such methods are used.¹

Principles of sociology involved in method. Educational sociology should provide help in adjusting the educational program to meet the needs of society, in somewhat the same way that educational psychology guides teachers in carrying on the school program to meet the individual needs of pupils. The purpose of teaching from a psychological point of view is to change or modify the reactions of pupils to specific situations. This involves a reorganization and reconstruction of the behavior patterns of individuals. Sociology is particularly interested in the intelligent reconstruction of society in order that man may live in a better social order—a social order in which more good and happiness accrues to all people.

Education has the responsibility of planning the school curriculum, organizing and administering the program, and applying methods of teaching which will result in the greatest possible good to the individual and to society. To this end it is essential that teachers of physical education know the fundamentals of sociology. The following statements are indicative of the importance of the principles of sociology as a guide to the selection of methods in teaching physical education.

1. *All education should be of utilitarian value.* Physical education should be taught in such a way that it will function in the actual life of the boys and girls. It has been traditional in education to teach certain subjects such as history, algebra, and languages with much emphasis on the subject matter contained in these subjects. After the subjects have been included in the curriculum a justification is always prepared for them on the basis of their values for citizenship, mental discipline, preparation for more advanced study, or other general and indefinite outcomes. We should make sure that, in teaching physical education, we teach in such a way that some definite and objective results are secured, results which are helpful in life as it is being lived at the present time, and not what would have been useful a hundred years ago. This point of view emphasizes the utilitarian values of education. It is not intended, however, that the idea of utility shall be interpreted so as to include only the activities involved in earning a living. Many activities and experiences are of

¹ Jesse Feiring Williams, *The Principles of Physical Education*, p. 322. Philadelphia: W. B. Saunders Company, 1927.

real practical use in helping persons to live happily and successfully that are not of any immediate vocational significance.

In 1859 Herbert Spencer pointed out the importance of conducting education in such a way as to prepare children for life in the society in which they are living. The following statement by him expresses well this point of view.

How to live?—that is the essential question for us. Not how to live in the mere material sense only, but in the widest sense. The general problem which comprehends every special problem is—the right ruling of conduct in all directions under all circumstances. In what way to treat the body; in what way to treat the mind; in what way to manage our affairs; in what way to bring up a family; in what way to utilize those sources of happiness which nature supplies—how to use all our faculties to the greatest advantage of ourselves and others—how to live completely? And this being the great thing needful for us to learn, is, by consequence, the great thing which education has to teach. To prepare us for complete living is the function which education has to discharge; and the only rational mode of judging of an educational course is, to judge in what degree it discharges such functions.

2. *Education should help each person to be assimilated into the society in which he is living, and should help him adjust successfully to changing social conditions.* In a democratic society physical education should be taught in such a way as to develop self-direction, self-control, initiative, and ability to make decisions in light of the possible outcomes of different lines of conduct. In a country interested in perpetuating a caste system of society the methods of teaching physical education would be quite different.

One of the problems in a democracy which must be considered by all teachers, including physical education teachers, is just what degree of solidarity in thinking and acting is necessary and desirable. There seems to be no doubt in the minds of most people that a great deal of coöperation and working together is essential in even a most liberal type of democratic society. Physical education can readily adjust its methods so as to help all pupils to gain some recognition of the importance of all members of a social group playing together or coöperating voluntarily for the good of the group. This type of intelligent voluntary coöperation will work for the best interests of the group and also for the best interests of the individual. Kipling in his "Law of the Jungle" has stated this sociological truth in the following words:

Now this is the law of the jungle,
And this rule runneth forward and back,
That the strength of the pack is the wolf,
And the strength of the wolf is the pack.

3. *Education should increase the shared interests of each individual and make them broader.* The interests which may be shared and held in common with other people include ideas and emotional experiences such as likes, dislikes, and appreciations. The sharing of interests helps persons to understand each other, to be tolerant of different points of view, and to develop a desirable type of like-mindedness. A certain degree of similarity in thinking is desirable in a democracy in order that the entire group may be able to work together willingly for the common good. It must be recognized, however, that members of a group tend to be pulled to the common level in their ideals and ways of thinking. The common level may be up for some individuals and down for others. If a person associates continually with others he will be likely to think in the same terms as they. A person who has achieved a higher level of ideals and thinking than the average of the group in which he lives may avoid a lowering of his standards. One way of doing this is to behave and think at all times in a way that he knows would be approved by the more intelligent and idealistic group.

4. *Socializing values are inherent in play.* The methods used in teaching physical education should take advantage of the socializing values which are inherent in play. Play is the greatest leveler of inequalities between man and man. If the son of the ash man, who lives across the railroad track, consistently tackles for a loss the son of the banker, who lives in the big house on the hill, the latter boy will soon learn to respect the good qualities of the former. Contacts and experiences in play are among the most effective means of breaking down prejudices and building up a community of interests.

The available evidence, such as the work by Hartshorne and May,¹ does not indicate that socialization can be helped a great deal by direct formal instruction. It seems that socialization is contagious and persons may become infected by exposure in situations where desirable social behavior is practiced. It is incumbent upon physical education teachers to control the situations in the gymnasium, the locker room, and on the play field so that the socialization of boys and girls will be advanced. The lack of adequate evidence to prove conclusively the value of direct instruction in the development of social and moral behavior should not deter teachers from taking advantage of every real opportunity to give such instruction. The weight of opinion and some scientific evidence indicates such efforts are justifiable.

5. *Man is essentially social by nature.* In choosing methods to be

¹ Hugh Hartshorne and Mark A. May, *Studies in Deceit*. New York: The Macmillan Company, 1928.

used in teaching physical education the fact should be kept in mind that moral human beings of all ages naturally seek the company and companionship of others. This tendency may be more pronounced during the period of adolescence, but it is present throughout life. Children should be permitted to express their choices of the activities to be used. They should be permitted to serve as leaders and squad leaders, and should be encouraged to take an active part in the organization of the class. Procedures such as these do not make teaching easier. In fact it takes a much better teacher to guide the participation of pupils than it does to conduct a teacher-dominated class. It does, however, give children some experience in democratic living and contributes to their socialization.

The influence of the curriculum on method. The subject matter to be taught and the way that a school is organized have much influence on methods of teaching. A curriculum which specified a series of formal exercises and apparatus stunts for each grade would involve a method different from that demanded by a curriculum which provided for teaching play activities for use during leisure time.

Meriam¹ has pointed out that there have been four movements affecting the school curriculum within recent years, all of which have emphasized an activity curriculum. These movements are summarized in the following paragraphs.

1. *Learning and doing.* The point-of-view in this movement holds definitely to the ideal that learning takes place only through activity by the learner. James' dictum, "No impression without expression," is emphasized. Persons through activity are "doing to learn" and "learning to do." That is, they wish to learn something and therefore do the things which will contribute to the learning; or they wish to do something, hence they learn the things which are necessary to help them do it.

2. *Pleasing the children.* The recognition of children as distinct personalities by parents and teachers has become more widespread. Children have been given more freedom to choose the activities in which they participate and broader opportunities have been provided for self-expression. There is nothing intrinsically objectionable about encouraging children to participate in educational activities which are pleasing to them, but material should not be taught solely because it is pleasing. There are two different types of pleasure: one a superficial, tickling kind of sensation; and the other the result of real satisfactions. The latter kind involves a more active response by the learner than does the superficial tickling type. The curriculum

¹Junius L. Meriam, "A Life Activity Curriculum," *Teachers College Record*, XXXIII (October, 1931), 15-25.

should provide for teaching activities from real life. This will most probably result in deep and rich satisfactions to the pupils.

3. *Practical schooling.* Throughout the history of education there has been a conflict between realism and formalism. Realism is the view that schools should teach material which will be of some immediate use to the learner. Formalism bases its claims on the possible future benefits which education may bring to the pupils. The emphasis on the practical value of education to everyday living has greatly influenced the curriculum in the last few years. In physical education stress has been placed on the importance of teaching activities which can be used as recreational activities during leisure time.

4. *Individual differences.* The development of more accurate instruments of measurement in the fields of education and physical education has stimulated the effort of educators to provide a school program suited to the individual differences of the pupils. Efforts of this kind have sometimes taken the form of permitting and encouraging children to participate in activities which happen to make an immediate appeal to their interests. It is believed to be a better plan to determine as accurately as possible the present status and possibilities of each pupil, and then to organize a program which will come nearest to meeting the needs of each pupil.

When the activities of the curriculum are chosen from real life these four influences are relatively unimportant. Likewise, method becomes less significant because opportunity is provided for interesting creative activity by the pupils. The methods used become more largely techniques of organization, leadership, and advice rather than the use of specific teaching devices. It is a mistake to conclude, however, that there is no need for a careful organization of the activities in a curriculum made up of life activities. It is essential that the school program of physical education be more carefully organized when natural activities are being used than when formal gymnastics comprise the content of curriculum.

Summary. Method in physical education is the technique or procedure used by a teacher to direct and control the experiences of pupils in an effort to make desirable changes in them. Every teacher of physical education should master the principles underlying good methods of teaching and keep up with the developments and improvements in this field. In choosing methods to be used in teaching physical education it is essential that the pertinent data from psychology, physiology, hygiene, anatomy, sociology, and education be recognized and used. Data from these fields are particularly important in understanding the nature and characteristics of children.

In this connection it is of value to consider the characteristics of

the different age periods of children and some of the theories which have been advanced to explain why children play. It is also worthwhile to be familiar with some of the methods of teaching, the names of which have become somewhat standardized in our vocabulary. The specific application to teaching of some of the principles of psychology, physiology, anatomy, and sociology, is particularly valuable in a consideration of the best methods to use in physical education. The subject matter to be taught and the way that a school is organized also have much influence on shaping the methods of teaching which are used.

QUESTIONS

1. What significance has a knowledge of child nature in the choice of methods of teaching physical education?
2. What are the characteristics of the different age periods of children as stated by Joseph Lee?
3. What are the four levels of conduct which have been distinguished by McDougall?
4. What explanations of play have been proposed in the Spencer-Schiller theory, the Gross theory, and the Recapitulation Theory?
5. What are the more prominent features of some methods of teaching, the names of which have become standardized in our vocabulary?
6. What are some principles of psychology which are fundamental to good methods in teaching physical education?
7. What are some physiological principles which are fundamental to good method in physical education?
8. What are some principles from anatomy which are significant in the choice of teaching methods in physical education?
9. What are some principles of sociology which are fundamental to method of teaching physical education?
10. What influence has the curriculum content on choice of method of teaching physical education?

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CHAPTER XI

PSYCHOLOGY OF PHYSICAL EDUCATION

The importance of psychology for teachers. It has been indicated in the preceding chapter that good methods of teaching physical education must be based on sound principles of psychology. Since this is true, every teacher should be familiar with some of the more pertinent material from the field of educational psychology. This should include the laws of learning, the characteristics of a learning curve, the methods of securing efficient learning, the techniques of developing motor skills, the place of drill in learning, and the facts and theories concerning the transfer of training. In this chapter is presented some of the subject matter suggested by these topics. An effort is also made to point out, by means of appropriate illustration, some applications of psychological principles to situations which arise in the teaching of physical education.

The laws of learning. Psychologists, as the result of their experiments and observations, have formulated several general principles which govern all types of learning. These principles are known as the laws of learning. They are frequently stated as the laws of readiness, exercise, and effect. The state of readiness determines the conditions and environment under which learning will be most likely to take place. The principle of exercise emphasizes the importance of continued practice of the reactions which are to be learned. The principle of effect has to do with the reactions which will survive.¹

The law of readiness. When a person wishes to do something, has a desire to act in a certain way, feels a definite inclination to behave in some way, or is ready to react to some situation in a definite way, we say he is in a state of readiness. When a person is in a state of readiness to react in a certain way it provides pleasure and satisfaction for him to act. If he is prevented from acting, he feels more or less annoyance. If, for example, a person is hungry he is in a state of readiness to eat; to obtain food provides satisfaction and failure to eat results in annoyance. The stronger the desire to act in a certain way the more satisfying will be the reactions which lead to the gratifications of the desire and the more annoying will be the reac-

¹ Rudolf Pintner, *Educational Psychology*, p. 193. New York: Henry Holt and Company, 1929.

tions which interfere with its achievement. Readiness is determined in many instances by wants and desires which are the result of innate tendencies. The desire to win social approval, to dominate others, to surpass other people, to overcome difficulties, to manipulate or handle things, to take part in physical activity are types of in-born tendencies which are very potent in determining states of readiness.

The most effective learning takes place when a pupil wishes to learn. In teaching physical education it is frequently helpful to recognize and use the natural tendencies of mankind for the purpose of getting pupils in a state of readiness to learn. Normal children naturally desire to participate in physical activity, but they do not instinctively prefer the definite type of organized activity which is usually taught in physical education. One must have enough ability in an activity to be successful in it in order to be in a state of readiness to participate in it often. In regard to many types of activity, ability must be developed before there will be any readiness for the activity. One of the objectives which we have accepted for physical education is to teach all pupils to perform several activities—such as swimming, tennis, handball, and golf—well enough to use them for recreation during leisure time. It is evident from the foregoing discussion that enough ability must be developed in some of these activities for the pupils to be successful in them. This is essential if the pupils are to be in a state of readiness to participate in the activities often.

The facts concerning the law of readiness have been summarized by Gates as follows:

The more fully an individual is in readiness to act in a certain way, the more satisfying it will be for him to act in that way and the more annoying it will be not to act in that way. Conversely, the more unready an individual is to act in a certain way the more annoying it will be for him to act in that way.¹

The law of exercise. The law of exercise summarizes facts of learning that are known to most every one. If a person repeats a reaction a number of times it becomes easier for him to react in that way. One acquires ways of reacting by exercising them. If, for example, a person wishes to learn to bat a baseball he will learn by exercising the connection between the stimulus of "baseball over the plate" and response of "swinging bat in good form." An unlimited amount of talking about the values and techniques of good batting

¹ Arthur I. Gates, *Psychology for Students of Education*, Revised Edition, p. 282. New York: The Macmillan Company, 1930. Quoted by permission of the publisher.

will not establish the desired reactions. It is also true, that other things being equal, the more a reaction is practiced the more accurate, easy, and prompt it will be. That is, if states of readiness, fatigue, and satisfaction do not handicap the learning, the more a person practices batting a baseball the better batter he will become. The fact has also been established that if a person fails to exercise a reaction over a period of time the connection between the stimulus and response becomes weakened and the reaction becomes less accurate, easy, and prompt. The law of exercise may be stated as follows:

Whenever a modifiable connection between a situation and a response is exercised, the strength of that connection is increased.¹

The law of effect. If a person learning to swim tries inhaling with his entire face and head under the water he has an annoying experience. He will try to avoid reacting again in that way. If he tries inhaling with his head turned to one side so that enough of his face clears the water to permit a good breath he will probably experience a considerable degree of satisfaction and will be likely to try that reaction again. If the second experience results in encouragement and commendation from the teacher and remarks of approval by other members of the class the degree of satisfaction will be increased and the reaction will be more likely to survive. These facts illustrate the law of effect which has been stated by Gates as follows:

Individuals tend to repeat those reactions which, on the whole, are satisfying, whereas they tend to avoid, and therefore fail to repeat, those reactions which, on the whole, are annoying.²

Teachers of physical education should attempt to attach satisfactions to good and desirable ways of reacting by their pupils. Annoyance should be attached to the undesirable reactions. In most situations the satisfaction or annoyance incident to success or failure is sufficient to motivate learning. For this reason the teaching situations should be planned so that the pupils can achieve satisfying success by a reasonable effort. If any one fails all the time he will become discouraged and stop trying.

Application of the laws of learning. All the laws of learning must be applied in each situation in order to secure the most effective learning. Poor results will be obtained from practice if an organism is not in a state of readiness to participate in an activity. It is also true that no great improvement will be shown if a person is eager to practice an activity but does not have an opportunity to exercise the

¹ Pintner, *op. cit.*, p. 190. Quoted by permission of the publisher.

² Gates, *op. cit.*, p. 271. Quoted by permission of the publisher.

necessary reactions. The best learning results are secured when a pupil motivated by a keen wish or desire has the opportunity for practicing correctly an activity in such a way that many satisfactions accrue to him. "Ten minutes of practice with full zeal, when the worker is keen to do his best and when he is thrilled at every advance in his accomplishment may be worth an hour of work done merely to avoid disfavor or reproach, or idly to pass away the time."¹

Concomitant and associate learnings. Each experience of a person brings about some change in him. Some rebuilding or reconstruction takes place. All learnings that one acquires are ways of reacting. Each reaction is complex and involves the entire organism. We learn methods of thinking, procedures in solving problems, and ways of feeling by reacting to stimuli in the same way that we learn to spell a word or to recognize a friend. Each experience includes many kinds of learnings in addition to the primary thing which is being learned.

Kilpatrick has called "these different kinds of learnings primary, associate, and concomitant."² They may be illustrated by a situation in baseball. If a boy were being taught to bat, the increase of skill and technique in batting would be the primary concern of the teacher. If the boy improved a great deal in ability to bat he would get credit for learning the desired subject matter and the teacher would receive credit for being a successful teacher. The batting skills that he learned would be the primary learnings.

In handling the bat he might observe the grain of the wood, the color of the varnish, and the shape of the bat. It is probable that he may wonder what kind of wood was used to make the bat, where trees of that kind grow, how big a tree is used in making bats, how much the wood costs from which a bat is made, and how wood for bats is seasoned and treated. He might also raise questions of a like nature in his mind concerning the varnish on the bats and the methods of manufacture. All of these things are interesting and probably worth knowing but they are not of immediate significance in the improvement of skill in batting. These ideas and thoughts are termed "associate learnings."

The attitudes that the boy develops in connection with the experience of learning to bat are called "concomitant learnings." He may form a favorable or unfavorable attitude toward the adage that "practice makes perfect." His attitudes may be influenced in regard to fair play, telling the truth, vigorous outdoor play, the teacher, and a large number of ideals and persons.

¹ Edward L. Thorndike and Arthur I. Gates, *Elementary Principles of Education*, p. 97. New York: The Macmillan Company, 1929. Quoted by permission of the publisher.

² William H. Kilpatrick, *Foundations of Method*, pp. 102-3. New York: The Macmillan Company, 1925.

Many educators believe that the associate and concomitant learnings in any situation are as important as the primary learnings. They point out that a person's character is comprised largely of his attitudes towards other people, principles, and ideals. No doubt these other learnings which take place simultaneously with the direct or primary learnings are of much importance in education. It is essential, therefore, that physical education teachers use a "wider method" in teaching which will recognize the inevitableness of simultaneous learnings and the responsibility of teachers for molding them into sound and desirable attitudes.

Characteristics of the learning curve. What we speak of as the learning curve is a graphic representation of the improvement made as the result of practice in any function. The learning curve might be said to show a picture of the amount, rate, and limit of learning of an individual in a way of reacting. There are no characteristics which are common to all learning curves. The shape of each curve depends on the thing being learned, the person doing the learning, and the conditions under which the learning is done. One person may learn how to pitch strikes in baseball at a much faster rate than some other person. Yet the other person may learn football signals or a series of dates in history much faster. There are some features which are found in most curves but they do not appear at the same rate or in the same amount in any two curves. It is not accurate, therefore, to speak of a typical or average learning curve.

A characteristic which is found in many learning curves, but not in all of them, is a rapid increase in the rate of improvement at the beginning of the practice. This rapid rise is called the "initial spurt." This period of relatively rapid learning is probably due to the fact that the easy reactions are learned quickly at first. The more difficult reactions require a longer period in which to learn them and therefore cause the curve to rise more slowly. The interest and enthusiasm of the learner when a new function is being learned may also help to account for the initial spurt when it occurs. It is probable that this rapid initial rise will occur in a relatively large number of the learning curves of motor skills because many of the reactions are not very complex and are easy to learn.

An "end spurt," which is a period of relatively rapid learning near the end of the practice, is shown by some curves. This may be due to the fact that the learner realizes the learning is drawing to a close and he puts forth renewed effort in order to accomplish as much as possible in the remaining time. It may also be due to the cumulative effect of the reactions which have been mastered during the entire learning period.

Many curves show a flattening out at one or more times during the learning. These flat parts of the curve are called "plateaus" and apparently no learning takes place during the time represented by them. It is believed, however, that some of the more difficult reactions are being learned during these periods and that some of the reactions which already have been learned are being over-learned so that they will be remembered longer or made automatic.

In some physical activities, such as the hundred-yard dash, it is probable that records have been made which approximate the upper limits of achievement possible for the human race. It should be noted that the statement made here is that the "approximate upper limits" have been reached in some of these events which apparently do not offer much opportunity for any great improvement in form. No doubt the present world records in all events will be bettered but it does not seem probable that any outstanding improvement will be made in some of the records. When a learning curve reaches the point where no improvement can be shown it means that the *physiological limit* has been reached in that function. The physiological limit is the highest level of proficiency the organism is physiologically capable of achieving.

Although a few champion athletes may have almost reached the physiological limit of learning in some events, it is not likely that this will be a problem to teachers of physical education. Relatively few individuals come anywhere near their physiological limit in either physical or mental functions. What usually happens is that most persons reach a stage of learning in each reaction which enables them to get along reasonably well in their environment. After this level of ability is reached there is no particular motivation to cause one to work hard in order to become better. Most persons, for example, do not improve their speed in reading after they finish junior high school. They do not make any effort to improve their speed and skill in writing after they reach a point where their ability in writing meets their needs. The same thing is true of innumerable other functions that we perform; for instance, running, throwing, batting, punting, swimming, playing tennis or handball, and shooting. Except in the case of coaches who are attempting to develop champions, teachers of physical education are not concerned about the physiological limit. Their objective should be to raise the ability of all their pupils in a number of activities to the point where these activities will be of real use to the pupils in their daily lives.

How to secure efficient learning. In striving for efficient learning there are some definite and established principles that should be recognized. Each experience of an individual results in learnings, but

in physical education we are interested in directed learning. We wish to have each reaction of our pupils contribute to the achievement of the goals which we are seeking. Some of the principles of efficient learning which have been formulated by psychologists follow.

1. *All learning is reacting.* We learn to play football by reacting to football situations. We learn to dance by reacting to dance situations. In fact, we learn to do anything by doing it. This is true whether it is a case of motor skills, mental learnings, feelings, or moral behavior. It is essential, therefore, that we learn reactions in the way in which it will be necessary for them to function. In learning to punt a football, for example, the kicker should practice kicking by receiving the ball from a snapper-back, with opposing ends rushing toward him.

2. *The learner must have an intent to learn.* If he is not interested in improving his ability, if he is satisfied with his present level of achievement, or if he has made certain habits automatic without perfecting them, very little improvement may be expected. When pupils reach this stage in their learning it is necessary that renewed interest in improvement be stimulated. An unusually skillful demonstration of the activities by the teacher may create a new interest and serve as an ideal of achievement toward which the pupils may strive. Observing outstanding performances by star college athletes or professionals may cause pupils to be dissatisfied with their present low level of ability and thereby stimulate their efforts to perfect their skill. Reading newspaper accounts of the athletic achievements of prominent persons or stories about imaginary heroes may help to bring a renewed intent to acquire a higher level of skill.

3. *Irrelevant reactions should be avoided.* Do not form habits that will have to be broken later. For instance, fundamental skills such as batting, throwing, or kicking should not be taught by count. The smooth and harmonious execution of the skill may be broken if the players have formed the habit of waiting for a count or command.

4. *Most physical education skills should be learned as whole skills, and not broken up into parts.* During the practice periods the pupils should be encouraged to practice and learn whole skills instead of learning parts of a skill. Take the shot put as an example. Experience has shown that the shift, reverse, and follow-through should all form one whole skill and should be practiced most of the time as a complete unit. If each of these movements is practiced separately and then the complete act of putting the shot, it will be more difficult and the results will not be as satisfactory.

It is believed to be more economical and effective to learn an entire

unit of connected work rather than to break it up into small parts. This is true in nearly all types of learning, whether it be predominantly motor or intellectual learning. It has been quite definitely established as the result of controlled studies that, as a rule, materials can be memorized better by the whole method than by learning parts of the material and then putting the parts together to form the whole. It has not been so definitely established that the whole method is always the best in learning all motor skills but the available evidence seems to indicate that the whole method is preferable in learning the types of skills which are used in physical education. The learning of the motor skills involved in a complicated pencil maze probably is accomplished better by the part method.

Any unit of work which is being learned must be small enough to be understood and comprehended by the learner. In teaching basketball, for example, the entire game cannot be learned satisfactorily in one unit. But the different fundamentals such as pivoting, the various methods of passing and shooting and dribbling should each be taught as a whole, complete activity, and not broken up into a number of smaller movements. Practically all of the fundamental muscular skills which are used in physical education may be learned better by the whole method than by the part method.

5. *Any effort to arouse the emotions of players to a high pitch should be avoided.* "Emotions represent a general stirring up of the visceral and organic parts of an individual. They represent a preparation for extreme physical exertion. They do not help in the finer reactions required for acts of skill or acts of judgment and reasoning. They disturb the poise of the learner."¹ Griffith² has pointed out that even in connection with coaching 'varsity football teams for intercollegiate competition it is poor strategy and reflects poor judgment and lack of vision to "key up" men emotionally.

6. *The length and distribution of the learning periods are important factors in efficient learning.* Learning takes place better if the practice periods are comparatively short and are spaced out over a long period of time. If, for instance, six hours were to be spent in practicing a motor skill it would be more effective to practice twenty minutes a day for eighteen days than to practice one hour a day for each of six days. Griffith³ states that the most favorable length of practice periods for single skills like basket-shooting, dribbling, punting, and serving is approximately twenty minutes. He also states that when a new skill is being learned, the first practice periods

¹ Pintner, *op. cit.*, pp. 236-37. Quoted by permission of the publisher.

² Coleman R. Griffith, *The Psychology of Coaching*, pp. 88-89. New York: Charles Scribner's Sons, 1926.

³ *Op. cit.*, p. 21.

may advantageously come twice a day. After the first few periods it is more effective to practice a skill only once a day. During the later stages of the learning it is more economical to practice any one skill only every two or three days.

7. *The learner should have knowledge of the ends sought or the outcomes expected from the practice periods.* It has been found that persons learn better when they know the objective toward which they are striving. Pupils in physical education should know the degree of skill which they might reasonably be expected to achieve. In coaching athletic teams the degree of skill sought is usually that which will permit a person to make the team. There are also rather well recognized levels of achievement such as the distance and accuracy to be achieved in kicking, passing, or basket-shooting. It is believed that some of the standardized motor achievements tables will prove valuable in this connection. Some of the tests which might be used are the Athletic Badge test, the Athletic Star test, the National Physical Achievement Standards, the Detroit Decathlon, the Detroit Pentathlon, the Philadelphia Age-Aim Charts, the California Decathlon, and the Los Angeles Achievement Expectancy Tables.

8. *The learner should have knowledge of the improvement he is making.* In order that this may be possible it will be necessary for each teacher to keep accurate records of the results achieved. This would make necessary the giving of achievement tests at the beginning of the practice and at frequent intervals during the learning period. In coaching a track team it is the usual procedure to have a time trial each Friday or Saturday for every man. This enables each man to know exactly what improvement he has made during the week of practice. This plan could very profitably be followed by teachers of physical education for all the members of their classes. The method of organization used in giving the tests and recording the results would have to be different from that used in connection with a track team. If it is not practicable to measure the improvement of each pupil every week, such measurements should be made as often as practicable. It seems that in practically all schools the work should be planned in such a way that every pupil could secure a measure of his improvement at least once every two weeks.

9. *Errors should be avoided and the ones that are already being made should be corrected.* It is often some apparently obscure error which prevents a person from making rapid improvement in motor ability. A fault in stance by batters in baseball or line men in football frequently interferes with the development of skill in these sports. The way that players hold a basketball and use the arms in shooting may determine their rate of learning these skills. The method of

swinging the arms in the start of a dash is another illustration of how apparently small errors may influence adversely the results of practice. It should be one of the main concerns of physical education teachers to watch for all errors in form and to help their pupils correct them. The available evidence seems to indicate that an error which is once learned is never completely eradicated. It is important, therefore, that every care be taken to provide correct practice in the activities which are being taught. The desirable reactions should be strengthened by attaching satisfaction to them and the incorrect reactions should be discouraged by making them a source of annoyance.

10. *Incentives should be provided which will serve as motivation for learning.* The most common incentive used to motivate learning is encouragement. This encouragement may be provided by the teacher and should also come as the result of success in the activities. All learning situations should be planned so that all the pupils can achieve some degree of success. If a person fails all the time in his efforts to accomplish anything he will become discouraged and quit trying. Difficulties should be of such a nature as to challenge the abilities of the pupils, but it should be possible for most of them to achieve success by diligent effort. Various devices which involve prizes and awards have been used. As a usual thing, prizes, which are not the direct consequence or outcome of the activity, provide a rather low type of motivation. The use of point systems in connection with physical education has been a rather common method of motivating practice and learning. Some point systems serve the dual purpose of showing the pupils the improvement that they are making and of providing a type of incentive for learning. The value of any point system depends on the way that it is planned and on the way in which it is administered. A good point system that is conducted well can be made to serve a good purpose. It should not be assumed, however, that all point systems in all situations secure good results.

11. *The content or subject matter which is taught should be adapted to the mental and physical level of the pupils.* It is self-evident that only limited learning will take place if the subject matter presented to pupils is beyond the range of their ability. A person reacts largely in terms of his past experiences. If the material presented has no connection or relationship to any past experiences of the individual, he is greatly limited in the reactions that he can make to the new material.

12. *Self-criticism should be developed on the part of the pupils.* Pupils should be led and encouraged to diagnose their own weak-

nesses in the performance of activities. After they point out the weaknesses or causes of failure, suggestions of methods to bring about improvement should be solicited by the teacher.

To illustrate this point, let us assume that two teams of boys were playing basketball and that one of the teams was decidedly the superior. In this situation after the boys had been playing long enough for them to realize that one team was the better, the teacher should stop the practice and call the pupils to him. He should point out the fact that one of the teams was much superior and ask the boys for suggestions as to why this is true. In this case a number of reasons might be advanced: the better team has older and larger boys on it, the players run faster, the players are just naturally better performers, they make more baskets out of a given number of trials, and they pass directly and more accurately to the members of their team. These diagnoses should be listed and discussed. Then the pupils should be asked for suggestions as to methods of improvement. In all probability the suggestion will be made that more drill on the techniques of basket-shooting and passing is needed. Following this suggestion drill should be conducted on these fundamental skills. After a period of drill the boys should be permitted to play the game again so that they may have the opportunity to apply their improved skill in an actual game situation.

Not only in team-game activities should pupils be trained in self-criticism. In all the activities of the program, such as swimming, handball, tennis, golf, riding, shooting, squash, and dancing, boys and girls should be encouraged to study and solve their own problems. Teachers should take advantage of every opportunity to develop this habit into an attitude or generalization so that their pupils would be more likely to apply this principle in other life situations.

How to develop motor skills. The same general principles should be used in teaching motor skills as in teaching intellectual activities. It is necessary that the learning be motivated by a definite and meaningful interest and that the activities be within the range of the experiences and abilities of the pupils. The situations during practice must be planned so that the right reactions will bring a reasonable degree of success accompanied by satisfaction and that the wrong reactions are discouraged. In developing motor skills models of good performance should be provided, the essentials of good form discussed and emphasized, and the practice periods carefully conducted and controlled so that the correct responses may be made largely automatic.

In many of the larger movements in physical education, such as the use of the arms and legs in swimming, blocking and tackling in

football, and passing in basketball, the pupils can be helped a great deal by observing a demonstration by the teacher. In some of the more finely coördinated movements such as are used in fencing and tap dancing the muscular reactions are more obscure and the teacher sometimes needs to set up as a model the product of the muscular reactions instead of the actual movements themselves.

In teaching motor skills it is always desirable to provide a model or a demonstration for the pupils. This demonstration should be supplemented by an oral, and sometimes written, description. It is doubtful that any one could ever learn to swim well, play baseball, football, end-ball, or any other complex motor activity by attempting to follow oral directions. If models are provided the oral instructions are much more valuable. Motion pictures, diagrams, charts, and photographs have all been found useful in providing models for pupils. Some teachers keep a scrap book or file of pictures of champion performers clipped from newspapers. The illustrations in books and magazines provide another source of valuable material. A wide use of motion pictures using the 16 mm. film has been made in connection with coaching football teams. This method provides instructional possibilities for all phases of physical education that should be developed more widely. There are now available from commercial motion picture distributors some excellent motion picture films dealing largely with the more highly organized forms of athletics, such as football and speedball.

Emphasis on form in motor skills. In most physical activities there is a form, or technique, which has been found to be effective in achieving a high degree of success. This form in each activity should be demonstrated and explained to the pupils. They should also be provided with opportunities for gaining experience in the use of the approved form. It should be recognized, however, that there will be individual variations in form. It is unwise to attempt to make all individuals conform to exactly the same style in the execution of motor skills. There are, however, certain fundamental elements of form that are essential in each type of activity. It is the responsibility of the teacher to recognize these essentials and to emphasize them while encouraging, in non-essentials, variations which seem natural to different individuals.

The practice periods must be conducted in such a way that a desire will be stimulated on the part of the pupils to perfect their skills, that adequate models will be provided of good form and technique for each activity, and that each pupil may have pointed out clearly to him his own good and bad points in form. The desirable variations from the model form should be encouraged and a definite effort made

to attach satisfactions to these reactions. The undesirable variations from the model should be discouraged and annoyances attached to these reactions.

The use of drill. Drill consists of the repetition of reactions in order to make them automatic habits. A series of automatic motor habits taken together are known as a skill. There is evidence to indicate that most motor skills are learned combinations of unlearned reactions. This means that the fundamental movements of each skill come as the result of maturation and do not have to be learned. The organization of unlearned reactions into a skilled movement is the result of the learning process. It is believed, therefore, that well motivated and correctly executed drill has an important place in teaching motor skills. This seems to be true whether the fundamentals of skilled movements are learned or are the result of maturation. The maturity of the elementary muscular functions, on which skill depends, probably takes place between the ages of 15 and 20 years.

Drill on motor habits and skills is for the purpose of making them automatic in order that these ways of reacting may be of practical use without requiring attention to their execution. The rapid and efficient performance of any motor skill depends on its being automatic. A punter or runner on a football team, a batter or fielder in baseball, a basketball player in passing or shooting, a swimmer in breathing and executing the strokes have all practiced and drilled on these fundamental skills until they have become automatic. All fundamental skills in physical education should be made automatic. This accomplishment will insure more consistent and better performance by the players and will leave the higher mental processes free for the considerations of the strategy of the games and for the solution of problems.

Transfer of training. When a person speaks of transfer of training he means the carrying over of a skill or other reaction to situations that are different from the one in which the reaction was learned. If a person is a good tennis player it is probable that there is enough similarity between some of the techniques in squash and tennis for the tennis reactions to transfer to squash situations and help the individual to play squash well. It does not seem likely, however, that there would be much transfer from tennis to swimming. If, on the other hand, a child had considerable skill in soccer and end-ball, it is probable that there would be quite a little transfer to speedball because there are many similar skills in these games.

The same principle applies to the transfer of other types of learnings or reactions. If a practice that is fair or honest or courageous is taught merely as the required response in a specific situation, the transfer to

other situations is likely to be very small. If, on the other hand, the emphasis is placed on the general ideal of fairness or honesty or courageousness, and the specific situation is used only for illustration, the transfer is likely to be great. Enthusiasts over physical education have at times made claims for the character values of participation in physical education which are not inherent in activity itself. Many well motivated situations arise in physical education which offer unusual opportunities for teaching good reactions; but it is not assured that these reactions will in all cases transfer to other life situations, and the probability of transfer will depend on whether the emphasis is on ideals or on the responses alone. Physical education teachers, like all other teachers, should seek to develop honesty, fairness, courage, courtesy, loyalty to high ideals and other characteristics and traits of character which are recognized as being good and desirable. It must not be assumed, however, that physical education is the only part of the school program that is definitely attempting to develop character. The entire educational program is directed toward that end.

The transfer of attitudes. The attitudes and generalizations of a person develop in connection with many of his experiences of different kinds. Attitudes and generalizations result from reacting in a certain way in a number of different situations. A boy may develop an attitude of fairness, for example, by being fair at all times in all the situations in the classroom; in the gymnasium; on the playground; at home with his parents, brothers, and servants; on hikes, camps, and other outings; at the skating rink; at the picture show and other places of amusement; and in many other situations. When a boy has developed an attitude as the result of a large number of specific experiences it is quite probable that it will be applied in determining his behavior in a wide variety of his life situations. An important function of the teacher, in the development of attitudes and ideals, is to point out the wider applications of specific desirable reactions. Thus the teacher may reduce the number of experiences needed to develop the attitudes and ideals, and may help the pupil to see their applications more clearly.

Physical education can be made to serve an important function in the education of boys and girls by providing many interesting and vital situations in which pupils may be led to react in desirable ways. Unusually intelligent persons usually generalize from a limited number of experiences. Persons who are not so bright must have a large number of experiences in many different situations in order to form a generalization which they can apply to new problems that arise.

One of the important functions of a teacher is to develop the good

reactions of his pupils in such a way that they will transfer to the largest possible number of situations in their lives. One way in which this can be done is to cause the children to see and recognize the similarities in different kinds of experiences and to help them develop general principles for guiding their behavior.

The theory of formal discipline. Present theories of transfer of training are in strong contrast with some of the older theories that have been advanced by psychologists.¹ The theory which had a great influence over a long period of time on methods in education was known as the "theory of formal discipline." This hypothesis was that the mind was made up of a group of "faculties" such as reason, imagination, will, memory, and attention. These faculties were supposed to be largely independent of each other and capable of being developed through exercise in any situation. If a person developed his imagination in telling ghost stories it was supposed that it would function in helping him to imagine or envision a great undertaking in engineering, finance, or literature. A person who developed his will power by digging up a stump in hot weather when his hands were blistered would have a stronger will to enable him to resist the temptation to do evil. A boy who, while taking calisthenic exercises, inhibited the movement of his arms until the command of execution was given, would develop the power to inhibit the urge to be naughty.

The persons who held to this theory believed that each "faculty" was a complete unit and could be developed as a whole. If the faculty of memory were exercised by memorizing poetry, the ability to remember all facts would be increased. Probably the same principle would be expected to work by having a college boy memorize the telephone numbers of his friends in order to develop his ability to remember irregular French verbs.

The use of the term *formal*² in connection with this theory indicated that it was the *form* of the activity which was important in developing a faculty. The content or subject matter was not thought to be of any particular significance so far as the disciplinary values were concerned. If the memory was being developed it made no difference what material was memorized; one type of material was as valuable as any other. The widespread acceptance of this belief caused many people to conclude that it made little difference what was taught a child so long as it was disagreeable and uninteresting to him.

The theory of formal discipline and its concomitant theory of mental faculties have no standing in education at the present time.

¹ William Clark Trow, *Educational Psychology*, pp. 270-71. Boston: Houghton Mifflin Company, 1931

² Arthur I. Gates, *Psychology for Students of Education*, Revised Edition, p. 420. New York: The Macmillan Company, 1930.

Numerous pieces of research have disproved them. They have been described here so that prospective teachers may be familiar with their meaning and can avoid being influenced by their fallacies.

Summary. Good methods of teaching must be based on sound principles of psychology. Every teacher, therefore, should be familiar with the more pertinent material on the laws of learning, the characteristics of a learning curve, the methods of securing efficient learning, the techniques of developing motor skills, the place of drill in learning, and the facts and theories concerning the transfer of training.

The laws of learning are frequently stated as the laws of readiness, exercise, and effect. The state of readiness determines the conditions and environment under which learning is most likely to take place. The principle of exercise emphasizes the importance of continued practice of the reactions which are to be learned. The principle of effect indicates the reactions which will survive.

It is important that physical education teachers use a "wider method" in teaching so as to make adequate provision for associate and concomitant learnings in addition to the primary learnings.

The shape of each learning curve depends on the person doing the learning, the thing being learned, and the conditions under which the learning is done. It is not accurate, therefore, to speak of a typical or average learning curve. The "initial spurt," "plateaus," and "end spurt" are characteristic of many learning curves, but not of all of them. The "physiological limit" is a term used to describe the point beyond which learning cannot take place because of physiological limitations of the organism itself. This limit is rarely if ever reached by most persons in any functions.

Psychologists have formulated some principles on which efficient learning is based. Teachers of physical education should be familiar with these principles and the methods of applying them to specific learning situations in physical education. The development of motor skills is based on established principles of learning. The application of some of these principles indicates that in developing motor skills, models of good performance should be provided, the essentials of good form should be discussed and emphasized, and the practice periods should be carefully conducted and controlled so that the correct responses may be made largely automatic. Drill should be used to make automatic all fundamental skills in physical education.

There is not available a great deal of authentic data on transfer of training. It is believed that teachers can help pupils to recognize the similarities in different kinds of experiences, and to develop general principles for guiding their behavior. Authoritative opinion in-

icates that specific reactions do not as a usual thing transfer from one situation to another. This theory is different from an older theory in psychology known as the theory of formal discipline which, with its concomitant theory of mental faculties, psychologists no longer accept as being sound.

QUESTIONS

1. What is the scope of each of the three laws of learning?
2. What is meant by "primary," "concomitant" and "associate" learnings?
3. What is the significance of "concomitant" and "associate" learnings in teaching physical education?
4. What are the characteristics which are found in many learning curves?
5. What are some of the fundamental facts of educational psychology which should be observed in order to secure efficient learning?
6. What place should a demonstration or model performance occupy in teaching motor skills?
7. What should be included in a practice period conducted for the purpose of developing motor skills?
8. How should drill be used in the development of motor skills?
9. What conditions are favorable to large transfer of training with respect to fairness, honesty, and so on?
10. What is the theory of formal discipline? To what extent is it accepted by educators to-day?

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CHAPTER XII

LESSON PLANNING AND MOTIVATION

The importance of planning. It is essential that a practical and successful application of the fundamental principles and methods of teaching be made to the specific learning situations which arise in connection with physical education. In order to do this well it is necessary to make definite plans for each period of teaching. Some periods may develop in such a way that it will not be wise to follow the pre-arranged plans, but the thought and study given to the problems by the teacher in making the plans will always prove to be of great value.

One is helped in planning the periods of teaching by considering the following items: the relative values of formal and natural methods, criteria for judging method, the organization of a period of teaching, the essentials of a period of teaching, making the daily lesson plan, the steps in a physical education lesson, and the use of devices in teaching physical education. This chapter presents some material which should be of practical help to teachers in planning successfully their periods of teaching.

Differences between formal and natural methods. The methods used in physical education have closely followed methods in general education. The psychological and philosophical theories that have shaped the practice in other parts of the educational program have been influential in determining the methods used in physical education. The theory of formal discipline, for example, has influenced procedures in physical education in the same way that it has in other subjects. The methods used in physical education in the past, and in some places at the present time, emphasized the *form* of the activity. School programs of physical education made up exclusively of formal gymnastics were concerned with the form of the exercises and not with any practical use they might have to the pupils. The strongest exponents of formal gymnastics believed that the practice of precision, accuracy, and promptness in connection with physical exercises would develop these "faculties" of the pupils and would function in other experiences throughout the pupils' lives. This belief was in keeping with the now discredited theories current in the field of education at the time.

The changes that have taken place in the methods of teaching physical education have been the result of fundamental changes in the commonly accepted theories underlying education. The newer methods emphasize the development of self-control, the ability to choose between two or more lines of conduct in terms of the probable outcomes, the ability to solve problems, and the learning of activities in such a way that they will actually be of some use in the everyday lives of the learners. This method is usually termed *natural* in contrast to the older formal method. The use of the term "natural" implies that the method used conforms to the interest, needs, and abilities of the pupils. It should not carry the connotation that it is desirable for method to conform completely to the *original* nature of human beings. It is important in teaching to know the evolutionary development of man but it should be recognized that nature is not infallible. Most of our educational efforts are directed toward the modification of the original nature of man.

Criteria for judging method. Some of the standards or criteria for judging methods of teaching have been summarized by Thorndike and Gates¹ as follows:

1. The method should facilitate the establishment of readiness for the activity in order to secure vigorous, whole-hearted activity.
2. The method should facilitate the production of the desired reactions and, as far as possible, reduce the undesired reactions.
3. The method should make as obvious as possible to the pupil or teacher or to both the appearance of suitable and unsuitable reactions.
4. The method should provide for the effective association of satisfaction with the desired and annoyance with the undesired reactions.
5. The method should establish the desired reactions in such a way as to provide for the widest transfer or application to the situations which normal life presents.
6. The method should, as far as possible, provide for the development of desirable concomitant reactions of intellectual, emotional, volitional, appreciative, and other types.
7. The method should, as far as possible, utilize the activities and conditions—such as clear objectives, natural activities and dispositions, successful mastery of difficulties, reasonable rivalry, etc.—which arouse interest and zeal and which enlist the most whole-hearted cooperation of the pupil.
8. The method should, in particular, be adaptable to the individual differences in capacity and interest of the pupils taught together.
9. The method should be adaptable to the requirements for progressive adjustment to the growth of the child in knowledge, ability, capacity for self-management, intellectual power, range and types of interest, emotional and

¹ Edward L. Thorndike and Arthur I. Gates, *Elementary Principles of Education*, pp. 236-38. New York: The Macmillan Company, 1929. Quoted by permission of the publisher.

volitional dispositions, and other aspects of his personality. The method should, in other words, be so adjusted to the character of growth as most effectively to perpetuate and stimulate further growth.

10. The method should be adaptable to the most fruitful utilization of various principles of economy such as the optimum length of practice periods, the prevention of over and under learning, the optimum distribution of practice and review, effective integration of old and new reactions by review, and the like.

Brace and Pinckney¹ have suggested that good method should provide for:

- A. Beneficial Physiological results and insure:
 - (1) hygienic surroundings
 - (2) safe activities
 - (3) good posture
 - (4) considerable big-muscle activity.
- B. Formation of desirable exercise habits.
- C. Mental content that challenges pupil ability.
- D. Activities suited to the sex, age, inclinations, previous experience, physical ability, and social character of the children concerned.
- E. Pupil initiative and leadership.
- F. The most efficient handling of time and equipment.
- G. Progression arranged in psychological order rather than logical.

It has frequently been found helpful for teachers to have a list of questions with which to gauge the quality of their teaching and the effectiveness of the methods used. Wood and Cassidy² have suggested a useful list of questions of this kind. LaSalle³ has set up in question form some criteria for judging results. She has prepared a number of detailed questions under the following headings: (1) organization of the room for work, (2) care and handling of supplies and equipment, (3) provision for individual differences, (4) individual pupil growth, (5) social growth, (6) pupil interest, (7) correlation with other subjects, (8) use of graphic devices, (9) the teacher, (10) specialized instruction in rhythms, organized free play, group games, and stunts, (11) gymnasium hygiene, and (12) specialized pupil abilities.

The organization of a period of teaching. The most important outcomes of education, so far as the children are concerned, are the result of what the school gets the pupils to do; not what it keeps

¹ David K. Brace and J. M. Pinckney, *Manual of Physical Education for Elementary Grades*, p. 22. Austin, Texas: University of Texas, 1930.

² Thomas D. Wood and Rosalind Frances Cassidy, *The New Physical Education*, pp. 325-32. New York: The Macmillan Company, 1927.

³ Dorothy LaSalle, *Play Activities for Elementary Schools*, pp. 21-29. New York: A. S. Barnes and Company, 1926.

them from doing. In planning a period of teaching it is essential that the greatest possible amount of constructive activity for each child be sought. Merely keeping children quiet and orderly does not contribute a great deal to their education. The work for an entire semester should be planned at the beginning of each semester. This does not mean that the plan should include detailed topic outlines of subject matter or the assignment of content to be taught each day. Outlining the program for a whole semester helps the teacher to make sure that the most important topics will be covered and that the available time will be equally distributed among the topics to be taught.

Each period should be planned in enough detail to make sure that the outcomes set for the semester will be achieved. The subject matter should be arranged so that the topics will be presented in psychological order. This means beginning with activities and subject matter which the children know and proceeding to the unknown, going from ideas and experiences which are near to the ones which are remote, progressing from concrete facts and ideas to the abstract, passing from easy things to the difficult, and from the simple to the complex.

The essential provisions for a period of teaching. There are at least four essential provisions which a teacher must make in planning a period of teaching. These provisions are necessary if he is to make the best use of the time and material at his disposal and to achieve the most desirable results with his pupils. Four of these essentials are as follows:

1. He must know definitely and clearly the outcomes for which he is working.
2. The activities, subject matter, materials, and apparatus must be selected and organized in such a way as to help in the attainment of the desired outcomes.
3. He must select and use the best and most effective methods of teaching for achieving the outcomes.
4. He must evaluate the results achieved in order that he might know what degree of success he has attained in securing the outcomes sought.¹

The daily lesson plan. Most teachers who have tried it have found the use of written daily lesson plans helpful. It is not practicable or wise to specify exactly how lesson plans should be arranged. Each teacher and each situation is different. Any lesson plan should be flexible so that the suggestions and interests of the pupils may be permitted to influence the way in which the class is conducted. The material to be taught, the kind of pupils in the class, and the conditions

¹ Arthur Raymond Mead, *Supervised Student Teaching*, p. 303. Richmond: Johnson Publishing Company, 1930.

under which the class is carried on should affect the development of lesson plans.

The following plan for teaching dodge ball to third grade children illustrates how lesson plans may be organized.¹

DODGE BALL

I. Teacher Objectives.

1. To emphasize the social element through the beginnings of team games, i.e., groups working with one purpose in view.
2. To develop skill in dodging through control of large muscle groups making use of the fundamental elements of agility, balance, strength, control and flexibility.
3. To develop skill in handling the ball.
4. To develop the realization that the acquisition of such skills makes a better game.
5. To give pleasure and satisfaction to the group through recreational activity of this type.

II. Pupil Objectives.

1. To enjoy himself.
2. To have his team win.

III. (A) Explanation of point and purpose of the game.

Through question and suggestion reach the decision that circle formation is best for playing, i.e., it is not easy to hit one another with the ball if we stand just anywhere in the room, etc.

Suggestions about throwing.

(B) Play the game.

Use various suggestions made.

(C) Discussion of game as played.

Was it wise to throw too high, too low, etc.

Emphasize things which make the game interesting and fast. Following this is the logical and psychological place for any drill that will help in playing the game.

(D) Play the game, making use of all good suggestions.

Summary of points to remember.

Drill may be used again if necessary.

Play again as well as possible.

The last playing of the game under D not only verifies the solution but the learning process as well in a measurable way, i.e., the success of the player in participating in the game. It is clearly seen how readily the teaching of dodge ball falls into the pattern of the steps of thinking.

¹ Jesse Peirring Williams, John I. Dambach, Norma Schwendener, *Methods in Physical Education*, pp. 99-101. Philadelphia: W. B. Saunders Company, 1932. Quoted by permission of the publisher.

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Brace and Pinckney¹ have prepared a number of typical lesson plans for different grades. The following two plans for teaching tumbling and apparatus in the fifth grade and for teaching volley ball in the sixth grade are illustrations of how teaching of this kind may be planned. A recent article by Brace proposes a somewhat different arrangement for a lesson plan.²

LESSON PLAN

Grade V

Topic: Tumbling and Apparatus. (Emphasize assisting.)

Objectives: To teach Forward Roll.

To teach rope climbing and hanging.

Children's

objective: To learn the Forward Roll and climbing the rope.

Situation: Have had only various elementary forms of Apparatus and Tumbling.

<i>Subject Matter and Procedure:</i>	<i>Suggestions</i>
<ol style="list-style-type: none"> 1. Forward Roll <ol style="list-style-type: none"> a. Kneel on mat, put hands in front and get a firm base on hands. b. Stretch knees so they are off mat and tuck head under. c. Hard push of feet, go over and take weight on shoulders, back, then hands. d. Roll to feet by catching hands around ankles (called a tuck). 2. Rope Climb <p>Jump to rope, grasping with hands and pulling up to erect position. Pull up with hands and grasp rope with feet, rope between feet and knees. Holding it in this manner pull up with hands.</p> 3. Elementary Hangs 	<p>(To be written in after the lesson is taught.)</p>

¹ *Op. cit.*, pp. 177, 207.

² David K. Brace. "The Handling of Objectives in Physical Education," *Journal of Health and Physical Education*, IV (November, 1933), 52.

LESSON PLAN

Grade V (Continued)

<i>Subject Matter and Procedure:</i>	<i>Suggestions</i>
<p>a. Ordinary-Hang.—The arms are straight with various grips. The body weight is suspended by the hands. The trunk is erect.</p> <p>b. Elbow-Hang.—As in ordinary hang, but suspended by the elbows instead of by the hands.</p> <p>c. Knee-Hang.—This may be a single or a double. The trunk is inverted, the hips straight, the knees straight, and the body weight suspended by the knees.</p> <p>d. Hand-Knee-Hang.—Hang with body weight suspended partly by the hands and partly by the feet.</p>	(To be written in after the lesson is taught.)
<p><i>Class Organization.</i>—The class is organized in squads. Care should be taken to see that the pupils understand the directions. It is wise to demonstrate. Care should be taken in hanging. Do not let them hang too long. Always have persons to assist.</p>	

LESSON PLAN

Grade VI

Topic:	Volley Ball.
Objectives:	To serve correctly as explained in the rule book.
	To serve low and swiftly.
	To learn to rotate.
Children's	
objective:	To serve the ball.
Situation:	Newcomb and other leading-up games to Volley Ball have been played. Volley Ball was played a little in the fifth grade.

LESSON PLAN

Grade VI (Continued)

<i>Subject Matter and Procedure:</i>	<i>Suggestions</i>
<p>Count off by two to get teams, if teams are not already formed (according to height).</p> <p><i>Practice Serving</i></p> <p>Discuss correct way.</p> <ol style="list-style-type: none"> 1. Ball in left hand. 2. Left foot forward. 3. Ball tossed up, right hand swings back and then forward without bending the elbow. 4. Hit ball with open hand at heel of palm. 5. Knees flexed, straighten when serve is made. (Have a pupil demonstrate in slow motion.) All practice without a ball. 	<p>(To be written in after the lesson is taught.)</p>
<i>Subject Matter and Procedure:</i>	<i>Suggestions</i>
<p>Discuss what constitutes a good serve.</p> <ol style="list-style-type: none"> 1. Position of body. 2. Accuracy. 3. Swiftmess. 4. Low over net—not high. <p>Practice in teams serving over the net. Instead of returning ball after a serve, the side receiving serves ball back again. Practice rotation while service is being done.</p>	

The place of motivation in teaching. A person learns much more rapidly and pleasantly if he is in a state of readiness to learn. It is also true that if he is interested in doing anything he does it better and gets more satisfaction out of doing it. Some of the things which are basic to interests are: (1) Activities suited to the ability and previous experience of each pupil; (2) a clear understanding of the ends to be achieved; (3) an appreciation of the values of each activity; (4) some knowledge and skill in the activities being taught; (5) knowledge of the progress being made toward learning the activities; and (6) a desire to reach a higher level of achievement.

It has been found that a number of devices and methods may be used successfully to get pupils in a state of readiness to learn and to help motivate their efforts. These procedures include the devices used

in teaching physical education, point systems, field days, and play days.

The use of devices in teaching physical education. There are a number of different devices which might be used to advantage at times in teaching physical education. Some of these are discussed briefly in the following paragraphs.

1. *Competition.* This method of motivating learning is used in physical education more than any other device. The subject matter and methods of organization in physical education lend themselves particularly well to the use of competition in teaching. There are certain cautions, however, that should be observed when competition is used. The emphasis should be placed on the coöperative effort for the good of the team rather than on humiliating and overcoming the opponents. Competition against one's own record is preferable as a teaching device to competition against other individuals who are not necessarily of comparable ability. When competition is used, accurate methods of classification, careful record keeping, expert officiating, and close supervision should be employed.

2. *Keeping graphs to show progress.* Graphs to show progress of each individual and of the entire class in various functions are helpful devices. They enable each pupil to see graphically just how much improvement he is making and permit comparisons between the achievement of the class and that of other groups. The use of graphs encourages and makes use of accurate records.

3. *Written examinations.* There is a place for written examinations in teaching physical education. Pupils should be able to describe the technique of the motor activities which they learn. They should know the rules and the strategy of the games which they play. The rules of sportsmanship which go with games should be familiar to boys and girls and they should be able to make applications of these social ways of behaving to other situations in life. Pupils should also be familiar with a considerable body of intellectual content closely associated with many physical activities. The results of written examinations provide a means of letting pupils know what progress they are making in the mastery of these things. Examinations of the newer informal types (true-false, best answer, multiple choice, and completion) lend themselves to use in physical education as do also examinations of the traditional essay type.

4. *Written and oral reports.* Investigations carried on by the pupils outside of class may be the basis of oral or written reports to the class. If the class were practicing running, for example, in preparation for the spring field day a great deal of study may be done by individual members of the class. This might include some of the historical facts

connected with running, as involved in the Greek Olympic games, for example, and the origin of the Marathon run. The form used by champion runners, and the most successful methods of starting, striding, carrying the arms, breathing, and finishing are matters on which pupils might make reports to the class.

5. *Illustrations.* Pictures, charts, demonstrations, and anecdotes are types of illustrations which might be used successfully as teaching devices in physical education. Pictures from newspapers, photographs of star performers in action, motion pictures of champions, and motion pictures of the members of the class or team in action are some of the forms in which pictures are useful. Pen and ink drawings to illustrate the mechanics of different skills have been found to be of value. Demonstrations by the teacher or by unusually skillful members of the class provide worthwhile illustrations. Stories or anecdotes of how games were won or of how a particular individual excelled in some event frequently help to impress on pupils effective plays and appropriate techniques.

6. *Notebooks.* Some teachers of physical education require all the members of their classes to keep notebooks. These notebooks are usually handed in to the teacher several times during the year and are marked by him. Notes on technique and form, rules, methods of organization, and practice directions are usually included. In some instances drawings to illustrate the different events and games are incorporated in the notebooks. There is probably no doubt that work of this kind has some value but it seems that the values are not commensurate with the time and effort required.

7. *Jury-panel discussions.* The jury-panel type of discussion is a method by which a small group of persons under the leadership of a chairman discusses some problem in the presence of an audience. This procedure has been said to provide coöperation in thinking. The discussion consists of a free-for-all expression of ideas. No set speeches are permitted. Every expression of an idea is welcomed. There is no debate or conflict. At the end of the discussion the chairman serves as a summarizer, points out the ideas which have been contributed and their relation to the problem under discussion. It is probable that this device might be used advantageously in helping pupils to solve some of the problems which arise in physical education. This device stimulates thinking in regard to a problem.

The use of point systems. There is much difference of opinion among teachers concerning the values which can be secured from the use of point systems in physical education. Some teachers believe that at best a point system serves as a crutch or scaffold to support

a program when it is just being begun; that the motivation supplied by it is entirely artificial; and that the pupils are encouraged to become interested in earning points rather than in developing sound and valuable skills, habits, and attitudes. Other persons believe that a well planned and administered point system provides the means for the organization of wholesome incentives. It has been pointed out that it is a sound and desirable procedure to recognize and use the social satisfaction, rivalry, and desire for successful achievement which are closely associated with many motor activities.

Many different kinds of point systems have been used with varying degrees of success in elementary schools, high schools, and colleges. Several point systems have been developed for use on a state-wide basis. The following outline of the program used in connection with the Alabama State Point System for High School Boys is illustrative of the types of activities and the assignment of point values which are included in the more comprehensive point systems.

METHOD OF EARNING BOYS' STATE LETTERS

The purpose of this point program is to offer to every boy an opportunity to play and achieve success in a wider field of activities than interscholastic athletics, leading to all round development. Such achievement is symbolized by the following state letters.

OUTLINE OF PROGRAM

First State Letter

To earn the First State Letter, the student must amass 500 points; 200 points from the activities listed under Group A, and 200 points from the activities listed under Group B, and 100 additional points to be chosen from either or both Groups as the candidate desires.

Second State Letter

To earn the Second State Letter, the student must amass 700 points; 250 points must be from the activities listed under Group A, and 250 points from the activities listed under Group B, and 200 additional points to be selected from either or both Groups as the student sees fit.

Third State Letter

To win the Third State Letter, a candidate must earn 800 points; 300 points from the activities listed under Group A; 300 points from the activities listed under Group B, and 200 additional points to be won from either or both Groups as the student chooses.

OUTLINE OF SCORING	FIRST STATE LETTER 500 POINTS	SECOND STATE LETTER 700 POINTS	THIRD STATE LETTER 800 POINTS
Group "A"			
Medical Examination Required....	30	30	30
Removable or Remediable Defects....	70	70	70
Athletic Training Habits.....	100	100	100
Scholarship	100	100	100
Sportsmanship	100	100	100
Leadership and Service.....	100	100	100
	200 Points Required Total 500 Points	250 Points Required Total 700 Points	300 Points Required Total 800 Points
Group "B"			
Team Sports	100	100	100
Individual and Dual Sports.....	100	100	100
Group Games and Contests.....	40	40	40
Athletic Skills.....	70	70	70
Stunts—Individual, Combination..	20	20	20
Outing Activities.....	50	50	50
Rhythmic Activities.....	20	20	20
Tumbling	10	10	10
Gymnastic Skills.....	20	20	20
Practice	70	70	70
	200 Points Required 100 Additional Points—Total 500 Points	250 Points Required 200 Additional Points—Total 700 Points	300 Points Required 200 Additional Points—Total 800 Points
TOTAL POSSIBLE	1000	1000	1000

Activities scored for any letter may be repeated for subsequent letters.

The organization of field days. A field day or play day can frequently be made to serve a useful purpose as part of the physical education program. It may serve as the culmination of the semester's or year's work, thereby demonstrating to the parents and other members of the community the kind of physical education which is carried on by the school. A contribution toward the interpretation of the program to the public may be made by this means. It also provides an opportunity for pupils and teachers to compare and evaluate the results of their work in physical education. Occasions of this kind may also be used to help build an *esprit de corps* and school morale on the part of the pupils and teachers. The experiences gained by teachers and pupils in socialized effort such as teamwork, coöperation, and group interest, are likewise an important outcome of these events.

A number of committees should be appointed to make the preliminary arrangements and carry out a field day or play day. The committees which have been found to be necessary are:

1. Program
2. Promotion and publicity
3. Registration
4. Transportation
5. Officials
6. Grounds and equipment
7. Lunch
8. Hospitality

The program for occasions of this kind may take the form of a play day, play festival, school fair, school picnic, sport carnival, school pageant, track and field meet, or a combination of two or more of these types. Often a field day program will combine features of a picnic, play day, and school fair. The traditional type of track and field meet such as is held by colleges and senior high schools is the least desirable type of program for a day of play. The program for any type of celebration should be arranged several months in advance of the date set for the field day so that the pupils may have ample time for practicing the events. The play and athletic part of the program should not be longer than two hours. It is much better to run off a few events promptly and well than to have a long program of poorly prepared activities with long intermissions between events. The following programs are suggestive of how events of this kind may be planned.

SUGGESTED PROGRAM FOR AN ENTIRE DAY

Morning:

Parade of school children, social organizations, industrial or business organizations, and floats.
Flag raising.
Community singing.
Health pageant, historical pageant, or industrial pageant.
Speeches.
Luncheons and social hour.

Afternoon:

Band concert.
School athletic events.
Adult athletic events.
Playground ball and volley ball.
Supper and social hour.

Evening:

Concert and entertainment.

SUGGESTED PROGRAM FOR AN AFTERNOON

Parade of children by grades. A banner or pennant for the whole school or for each grade will improve the appearance of the playground and will increase the interest of the children. The pupils of the school will have pleasure in making a supply of banners and pennants.

- Assembly on the playground.
- Pledge allegiance to the flag and salute.
- Song—"America."
- School, team, or grade songs and cheers.
- Singing games and folk dances.
- Athletic events for the teams (boys and girls together).
- Athletic events for boys alone.
- Athletic events for girls alone.
- Health songs.
- Announcement of winners.
- Cheer by all schools for the winning school.
- Athletic team games.
 - Playground ball.
 - Volley ball.
 - Dodge ball.

Play days for girls. The practice of having play days for high school and college girls has spread rapidly throughout the country in the last few years. This movement has been fostered by the women leaders in physical education to counteract the tendency of athletics for girls and women to follow the same patterns of organization, administration, and promotion that govern men's athletics. The term "play day," as the result of this influence, has come to have a rather definite meaning. The Women's Division of the National Amateur Athletic Federation has been aggressive in spreading the ideal of "a game for every girl and every girl in a game." This organization has been the most important influence in popularizing the play day idea of girls playing *with* rather than *against* one another. The spirit of a play day is that groups of girls from different schools may meet at a hostess school to participate in social activities together. These activities are largely sports and games.

The teams of girls that compete in a play day in most cases are composed of players from several different schools. When teams are organized on an informal basis in this way the degree of skill in playing is usually lessened, due to the fact that the members of each team have not practiced together. Experiences have shown, however, that teams made up in this way are able to play well enough for the players to get pleasure and satisfaction out of playing.

Play days should not take the place of all forms of competition

in sports for girls and women but it has been clearly demonstrated that such occasions offer possibilities for wholesome recreation and educational experiences in social situations. Every program of physical education for high school and college girls should provide for participation by most girls in one or more play days each year.

Summary. In order that a successful and practical application of the fundamental principles and methods of teaching may be made to specific situations in physical education it is essential that definite plans be made for each period of teaching. One is helped in planning a period of teaching by being familiar with the following items: the relative values of formal and natural methods of teaching, criteria for judging method, the organization of a period of teaching, the essentials of a period of teaching, how to make a daily lesson plan, the steps in a physical education lesson, and the use of devices in teaching physical education.

Natural methods of teaching are believed to be superior to formal methods. With natural methods the purpose is to develop qualities and teach activities which will actually be of some use in the everyday lives of the learners. With formal methods much of the emphasis is placed on the *form* of activities, rather than on any practical use they might have to the pupils. A definite statement of criteria for judging methods of teaching is helpful, and the methods which a teacher uses should be evaluated in terms of valid criteria.

The material which is to be taught should be organized in advance for a period covering at least one semester. There are four essentials that must be provided for in planning a period of teaching: (1) the teacher must know clearly the outcomes he is seeking, (2) the subject matter and materials must be selected and organized in such a way as to help in the attainment of the desired outcomes, (3) the teacher must select and use the best and most effective methods of teaching for achieving the outcomes, and (4) the teacher must evaluate the results achieved.

It has been found helpful for teachers to prepare a daily lesson plan to guide them in their teaching. There are at least two different methods of planning and conducting a lesson in physical education. One method emphasizes the teaching of subject matter and fails to recognize the individual differences of pupils. The other method stresses instruction suited to the needs and abilities of each pupil.

Persons engaged in physical education do not agree on the values which might be secured by using point systems in physical education. Some teachers believe that at best point systems serve as a crutch or scaffold to support a program of physical education during the

period of its inauguration. Others are of the opinion that a point system, when well planned and administered, is a sound and desirable means of recognizing and using for educational purposes social satisfaction, rivalry, and desire for successful achievement. The success with which a point system might be used depends largely on the situation in which it is used, the person in charge of its administration, and the way in which it is organized.

There have been a large number of point systems used with varying degrees of success in elementary schools, high schools, and colleges.

A field day or play day can frequently be used to secure desirable educational results and to help interpret the physical education program to the public. If an event of this kind is to be successful it must be carefully planned and efficiently carried out.

The practice of having play days for high school and college girls has spread rapidly throughout the country in the last few years. The fundamental idea underlying this development is that girls should play *with* rather than *against* one another. Play days should not supplant all competitive sports for girls but they should be provided for in every program of physical education for high school and college girls.

QUESTIONS

1. What are the characteristics and relative values of formal and natural methods of teaching physical education?
2. What criteria for judging methods have been proposed by Thorndike and Gates?
3. What items should be recognized in the organization of a period of teaching?
4. What are four essentials of a period of teaching?
5. What mechanical features might well be recognized in the preparation of a daily lesson plan?
6. What place should planned motivation occupy in the teaching of physical education?
7. How may devices be used in teaching physical education?
8. What are the advantages and the disadvantages of point systems in physical education?
9. What is the philosophy or point-of-view which has characterized the development of the play-day movement in this country?
10. What place should play days occupy in a program of physical education for high school girls?

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CHAPTER XIII

CLASS ORGANIZATION AND DISCIPLINE

Departmental organization. The administration of all parts of the physical education program should be under the direction of the principal of each school. He, in turn, should be directly responsible to the superintendent and ultimately to the general public through the board of education. It has been found to be a good plan in secondary schools to have one person as head or chairman of the work in physical education. This responsibility should include the regular class work for normal pupils, the classes for atypical children, the intramural athletics, and the inter-school athletics. The personnel engaged in the immediate administration and teaching of physical education should be individuals with adequate professional preparation in this field.

The organization of program in elementary schools. In elementary schools where the physical education is taught by the classroom teachers it has been found to be a satisfactory plan for all the classes to have physical education at the same time. If this is not practicable, all the first three grades may have their physical education period at the same time, and all in the next three grades at another period. This plan is recommended particularly for elementary schools that do not have adequate gymnasium, shower, and locker facilities.

During fair weather all classes should go to the playground. Each group should have a definite place assigned to them on the playground for their physical education class just as each class has a room in the building. A teacher must be responsible for teaching each group, must accompany the group to their assigned place on the playground, and should begin the lesson promptly. On the days when weather conditions are such that the physical education classes must be held indoors all the rooms and corridors should be used at the same time. Some of the advantages of this plan are:

1. Children may be grouped for physical education with other children of the same size and ability. For example, if there were a big twelve year old boy in the fourth grade he could join the group of sixth grade boys for physical education, and if there were a little

nine year old boy in the sixth grade he could join the fourth grade boys during the exercise periods.

2. In the upper grades, beginning usually with the fourth grade, boys and girls could be placed in separate groups. This is quite an advantage because it frequently is difficult to teach well a physical education class containing both boys and girls. There are other methods of making schedules which will enable boys and girls to be segregated for physical education but this plan simplifies the problem.

3. If the help of a supervisor of physical education were available, his services could be used to much better advantage. At the time of his visit to a school it would be necessary for him to stay for only one period, during which time he could observe the teaching of most of the teachers and be of help to the ones who needed it. Under a plan of each grade having physical education at a different time a supervisor would have to stay in a school of thirty teachers about four days in order to observe and help each teacher. In this way he would be giving an entire period to helping some teachers who did not need very much help and could help the ones who really needed it only once a month or possibly not so often.

4. The disturbance and annoyance to other teachers, caused by physical education classes passing through the corridors and playing games in rooms adjoining other rooms where academic classes are being conducted, is avoided.

5. A schedule can be made more satisfactorily for the use of the piano and the phonograph by classes engaged in rhythmical activities.

6. The whole school can be brought together with less interruption of the school routine for the purpose of discussing and planning play days and other celebrations.

Assignment of pupils to classes. Pupils should be assigned to classes in physical education on the basis of the results of the health examination and of a battery of tests. This battery of tests should include measurements of intelligence, native motor ability, achievement, bodily development, strength, athletic power, and posture. In order that pupils may be placed in classes suited to their needs, abilities, and interests it is necessary in larger secondary schools for each pupil to place his physical education class on his schedule first. If the academic classes are chosen first and then the physical education class placed in some convenient vacant period it will be practically impossible for pupils to be scheduled in homogeneous groups on the basis of their needs. Earlier chapters describe the techniques that are useful in determining the needs, abilities, and interests of pupils.

Exemption from physical education. Every reasonable effort should be made in every school to provide a program of physical

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education suited to the needs and abilities of each individual child. The results of the school medical examinations and of a battery of motor tests should be used as a guide in adjusting the program to the status of individuals. Some parents have a notion that they are better qualified to adjust the physical education program to the needs of their children than are the school physician and teacher of physical education. Cases of this kind sometimes present annoying administrative problems. A method which has been used successfully in meeting situations of this kind is to request the parents, who ask that their children be excused from physical education, to have a licensed physician of their own choice furnish the school authorities with a diagnosis and prescription for each child. The following form letters are used in the Cincinnati Public Schools in connection with this procedure. In some situations, where the physical education department gives a battery of tests to every pupil, it might be advisable to include in the letter to the family physician a statement of the results of these tests. This statement could include facts concerning the native motor ability, strength, achievement, posture, and athletic quotient of the pupil.

OFFICE OF THE SUPERINTENDENT
CINCINNATI PUBLIC SCHOOLS
216 EAST NINTH STREET
Department of Physical Education

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Dr. _____

My Dear Doctor:

All pupils in the public schools are required by state law to receive as part of their instruction a minimum of one hundred minutes per week in physical education. Modified courses of instruction are provided for pupils unable to take the course provided for normal children.

The character and effects of the instruction given are so varied that every pupil who is able to be in school should derive benefit from some phase of the physical education program. The object of this letter is to determine just what is best for the pupil in question.

Will you, therefore, kindly give on the reverse side of this letter such details of diagnosis as you deem necessary or advisable, stating fully which activities you think can be done with benefit to this pupil and which should be omitted? Your earnest coöperation is solicited. This information will be considered strictly confidential and treated with the utmost discretion.

Pending your answer the pupil will be excused from all physical education for one week.

The Board of Health is coöperating with this Department to further the best interests of the pupils. All requests to excuse pupils from physical education will be passed upon by the CHIEF MEDICAL INSPECTOR.

Please return this blank, when properly filled out, to: "THE CHIEF MEDICAL INSPECTOR," DEPARTMENT OF HEALTH, CITY HALL.

Very respectfully yours,
(Signature) W. K. STREIT,
Director of Physical Education.

(over)

OFFICE OF THE SUPERINTENDENT
CINCINNATI PUBLIC SCHOOLS
216 EAST NINTH STREET
Department of Physical Education

Official blank to be filled out by physician recommending modification of program or excusal of pupil from Physical Education.

Dr. _____
Chief Medical Inspector

DEAR SIR:

On account of _____
the physical education program of _____
a pupil in the _____ School, should
be modified as indicated below, for period of _____ months.

NOTE:—Please mark EACH of the following types of activity "E" if it is to be emphasized; "M" if it is to be with moderation; and "O" if it is to be omitted.

I. The regular gymnasium lessons embrace the following types of activity:

1. Marching, Running, Jumping.
2. Rhythms and Folk Dancing.
3. Calisthenics.
4. Games of great activity.
5. Games of slight activity.
6. Apparatus: Suspension, Support, Vaulting.
7. Self-testing stunts.
8. Athletics.
9. Swimming and Life Saving.

II. CORRECTIVE EXERCISE FOR SPECIFIC PURPOSES WILL BE GIVEN UPON YOUR REQUEST AS FOLLOWS:

1. Exercises tending to correct postural deformities: Drooping Head, Flat Chest, Round Shoulders, Lateral Curvature, Protruding Abdomen, Flat Feet.
2. Exercises tending to develop certain muscle groups: Shoulders, Arms, Legs, and Trunk.
3. Exercises to stimulate the action of the heart and lungs.

4. Exercises to promote neuro-muscular control and coördination.
5. Exercises affecting the abdominal and pelvic viscera.

NOTE:—Special exercises will not be given unless recommended by a physician. Structural deformities that belong in the realm of Orthopedics will not be treated without written instructions from the doctor in charge.

Remarks: _____

I hereby certify that I have carefully examined this pupil and that the recommendations made are based on this diagnosis.

Signature _____ M.D.

Date _____ Address _____ Tel. No. _____

Organization of class on the first day of school. When a new group reports to a teacher, a tentative class organization should be perfected promptly. This is necessary in order to facilitate the permanent organization of the class, to make possible the satisfactory administration of placement tests, and to permit instruction and class routine to be initiated without delay. An arbitrary division of the class into squads is one way of forming a temporary class organization. Each squad should contain from six to ten pupils, depending somewhat on the total number in the entire class. Each squad should elect a temporary leader. These squad leaders should meet the teacher for an extra conference period to have the placement tests explained and to receive instructions as to the methods of conducting a permanent class organization.

The first class period should be started promptly at the specified time, just as should all subsequent periods. The daily class routine should be explained, the method of taking roll described, and the signals used in conducting the class demonstrated. An explanation should be given of how lockers are assigned and of the uniforms required for class work. An interesting and appropriate type of activity should be taught and the class dismissed on time.

The class routine. There are a number of acts that, because they are repeated in practically the same way every time the class meets, should be made a matter of routine. This treatment will enable each class period to proceed more expeditiously, thereby saving time and energy for actual teaching. The routinization of the class procedure should be avoided, but activities such as changing clothes, bathing, passing to and from classes, and taking the roll can be made habitual. Oberteuffer¹ has suggested the following as a suitable routine for the

¹ Delbert Oberteuffer, *A Program for Junior and Senior High Schools*, pp. 72-73, Vol. III. Health and Physical Education Series of the State of Ohio, Department of Education, Columbus, Ohio: State Department of Education, 1932.

physical education classes of older children where a system of individual lockers is used.

1. Enter locker room and proceed to locker assigned.
2. Change clothing to gymnasium uniform.
3. Lock street clothes and valuables in lockers.
4. Go to gymnasium.
5. Free play until beginning of class.
6. At whistle, or other signal, report to squads.
7. Squad leaders check attendance and report.
8. Squad leaders receive day's assignments and squads move to assigned activities.
9. Activities proceed until dismissal time.
10. Return to locker room.
11. Secure towel and key.
12. Shower.
13. Dress, and replace gymnasium uniform in storage locker.
14. Leave locker room at signal.

The roll call. Taking the roll of each class should be made a matter of routine and should be planned so as to consume a minimum amount of time. Some of the methods that have been used in different schools include the calling of the names by the teacher, having spots or numbers painted on the floor and requiring each pupil to stand on an assigned spot or number while the teacher checks the vacant ones, having the entire class form in line and "count off" so the teacher may record the numbers which are not called, and having each squad leader take the roll of attendance for his squad.

The method of having squad leaders check the attendance of their squads is recommended for use in most situations. This method can be used successfully by requiring each squad to "fall in" at a designated place when the whistle is blown. A good procedure is to have the names of the members of each squad written on a 6 by 8 inch card with the necessary spaces ruled to record attendance and results of tests opposite each name. These cards should be kept at some place where they can easily be secured by the squad leaders at the beginning of each period. As soon as the roll is taken the cards should be returned to some designated place. Some teachers keep the roll cards in a small wall cabinet containing as many pigeon-holes as there are physical education classes. All the cards for each class are kept in the same pigeon-hole. When a squad leader is ready to check the roll he goes to the cabinet and gets the card for his squad. After the attendance has been checked each squad leader returns his card to the proper place in the cabinet. In some schools

the teacher has the squad leaders report to him for the roll cards and return them to him after the attendance has been recorded.

Assignment of lockers. Announcements concerning the assignment of lockers should be made at the first meeting of each class. It is essential that an orderly and carefully administered plan be adopted for assigning lockers to students and for keeping accurate records of the assignments. There are several satisfactory plans for doing this. Any plan used must provide records in such form that it can be easily determined which lockers are vacant. There must also be kept a double file of all assigned lockers so that any locker record may be easily found either according to number of locker or name of student.

The distribution of towels and suits. Towels may be furnished by each pupil or may be supplied by the school. The best plan is for the board of education to purchase the towels and to pay for having them laundered. This involves a considerable financial outlay, probably averaging about three cents for each towel used. In some situations the board of education cannot afford to pay this amount out of public funds and it then becomes necessary for each pupil to furnish his own towels and to keep them clean.

When towels are supplied by the school one towel should be issued to each pupil when his locker is assigned. A soiled towel should be exchanged for a clean one whenever needed. In communities where pupils furnish their own towels the teacher should insist that clean towels be used.

Suitable uniforms. In most high schools and colleges it is desirable and practicable for each pupil to wear a suitable uniform during the physical education periods. In some elementary schools such a plan is feasible and in all elementary schools where a gymnasium is used every pupil should wear soft soled shoes during the classes in physical education. The most economical and practical uniform for boys consists of plain white gymnasium pants, sleeveless shirts, shoes with rubber soles and canvas uppers, and ankle socks. The most common type of uniform for girls is a two-piece suit, although the one-piece suit is rapidly increasing in popularity.¹ The ankle length socks and white canvas high shoes with rubber soles are generally used.

It is desirable for both boys and girls to have sweat shirts to wear outdoors during cool weather. Sweaters are more expensive and not as satisfactory as sweat shirts. In some schools long trousers are provided for boys as part of the physical education uniform so that

¹ Mabel Lee, "A Survey of Athletic and Gymnastic Costumes Used by American Girls and Women," *Research Quarterly of the American Physical Education Association*, III (March, 1932), 5-47.

the legs may be covered on cool days outdoors. White washable trousers have been found to be satisfactory for this purpose.

Organization of the room for work. The care, arrangement, and availability of supplies and equipment and the organization of the pupils for class participation are important factors in the successful administration of a physical education class. LaSalle¹ has suggested some questions which are helpful to teachers in elementary schools in judging the efficiency of their class organization. The following list is suggestive of how the room should be organized:

1. Do children enter and leave in an orderly way?
2. Is time wasted in waiting in line?
3. Do children get their gymnasium shoes from lockers and put away street shoes quietly, quickly, and neatly?
4. Is the organization (formation) for changing shoes an effective one?
5. Are children dressed for play within five minutes?
6. Are coats, sweaters, rubbers, galoshes removed?
7. Are children in soft soled shoes? (If children are in stocking feet it should be because they are too poor to buy suitable shoes.)
8. Is the class grouped in such a way as to use all the available space?
9. Is the grouping made quickly with a minimum loss of time?
10. Is the grouping such as to provide the maximum participation for the largest possible number of children?
11. Are balls, ropes, jump standards, and other gymnasium supplies ready for immediate use?
12. Are baskets up and in good repair?
13. Are lockers equipped with locks?
14. Are lockers kept locked?
15. Is the floor marked plainly with play circles, center line, basketball court, baseball diamond?
16. Is the chinning bar securely fastened to the wall?
17. Are the mats clean?
18. Are the mats in good repair?
19. Are the mats hung up when not in use?
20. Are the mats lifted from the floor when being moved?
21. Do at least four children move the mats?
22. Are all balls kept well inflated?
23. Are the balls clean?
24. Are balls oiled before use on a wet day?

¹ Dorothy LaSalle, *Play Activities for Elementary Schools*, pp. 21-22. New York: A. S. Barnes and Company, 1926.

25. Are jump standards equipped with pegs and good crossbar?
26. Is the crossbar put on in such a way that it can be knocked off easily without danger of tripping?
27. Is the bulletin board up-to-date and neatly arranged?

The organization of squads for class work. A permanent organization of each class into squads should be perfected as soon as practicable after all pupils have completed the placement tests. The squads should be as nearly equal in skill and ability as it is possible to have them. In schools where professionally prepared teachers of physical education are employed the squads should be organized on the basis of the result of tests. In rural schools and other schools where all the physical education is taught by the regular classroom teachers the squads may be formed by permitting the elected squad leaders to choose the members of their squads in somewhat the same way that small boys choose sides for baseball. It may be practicable in some situations for the teacher to assign pupils to squads on the basis of their size, age, and what the teacher knows concerning their ability. A squad leader should be in charge of each squad. The squad leaders may be elected by the pupils or they may earn this distinction on the basis of merit. If the teachers appoint the squad leaders, definite standards by which the selection is made should be familiar to all the pupils.

The organization of squads for free play. In elementary schools a type of squad organization provides the means of placing a large number of children in educative situations. It is the most effective means of handling a large group of children in physical education classes. Squad play has been used successfully in a large number of cities. The work with this type of organization in Detroit, Michigan, and in Montclair, New Jersey, has attracted attention throughout the nation and has served as a model for many schools in other localities. The ideal toward which this type of organization is striving is to educate children to choose their own activities, select their own leaders, and direct their own play period. In order to attain this goal it is necessary to place children in situations which will provide gradually experiences in socialized and democratic behavior. The development of the ability for self-control and self-direction in children is a slow process. A great deal of observable progress should not be expected in a short period of time. Persons who have always been subjected to authoritative control should not be expected to make the best immediate use of unlimited freedom. Confusion is likely to result if a group of children who have been accustomed to conform

to discipline imposed by older people are suddenly placed in situations which depend entirely on the ability of the children to discipline themselves.

Class formations for teaching skills. The fundamental skills of games and athletic events can be practiced to the best advantage when the class is organized in squads. There are a number of different formations which each squad may use in the practice of skills and also for contests and relays.¹ These include variations of such formations as the circle, zig-zag, line, file, corner and shuttle. The diagrams on the following two pages show the formations most frequently used, and are self-explanatory.

The use of formations, such as the ones illustrated, enables all pupils to practice each skill a number of times during a period. If a person visits many classes in physical education he sees frequently classes in which most of the pupils are standing in line waiting for their turn to practice some skill. It often happens that a boy or girl will have an opportunity to actually participate in the class activities only five or six times during a class period. Such a limited amount of activity is not likely to result in any great improvement in skill or increase in interest. Every physical education class should be organized into enough squads, and suitable formations should be used, to enable every child to practice the fundamental skills a large number of times during each instructional period. It is important, however, that all practice be carried on correctly.

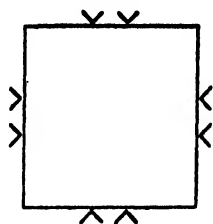
The educational significance of discipline. When human beings attempt to do anything together it is necessary that all persons concerned submit to some measure of restraint and direction. This fact is true whether it is a case of governmental activities, business enterprises, industrial undertakings, a camping trip, an educational project, or a football game. If any group undertaking is to be a success there must be a willingness on the part of the individuals involved to participate as members of the social group. Coöperative endeavor is essential for the best success in all matters where two or more persons are concerned. This has become more necessary in all social undertakings as civilization has advanced, life became more complex and men more interdependent.

The kind of discipline which controls individuals in their daily lives has changed radically in the last two decades. The older type of discipline was authoritative, dictatorial and autocratic. The larger

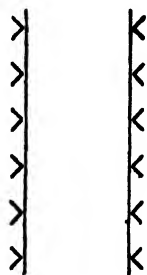
¹ Marjorie Hillas and Marian Knighton, *An Athletic Program for High School and College Women*, p. 8. New York: A. S. Barnes and Company, 1929.

David K. Brace and J. M. Pinckney, *Manual of Physical Education for Elementary Grades*, p. 24. Austin, Texas: University of Texas, 1930.

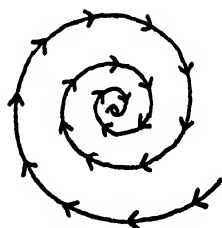
A Course of Study in Physical and Health Education for Grades One Through Six, pp. 84-85. Montgomery, Alabama: State Board of Education, 1931.



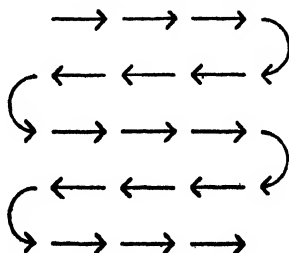
QUADRILLE



LONG WAY - for 6



SPIRAL



SERPENTINE

Goal Line _____

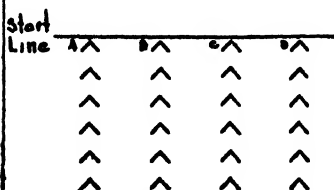


DIAGRAM for FILE RELAYS
Using Four Teams

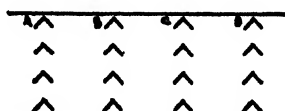
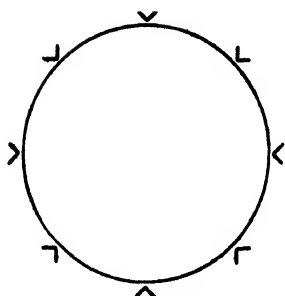
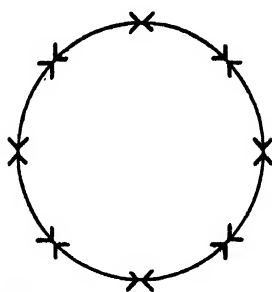


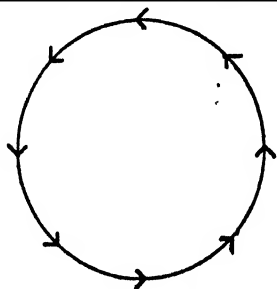
DIAGRAM for SHUTTLE RELAYS
Using Four Teams



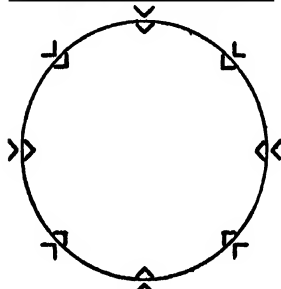
SINGLE CIRCLE
facing Center - Inward



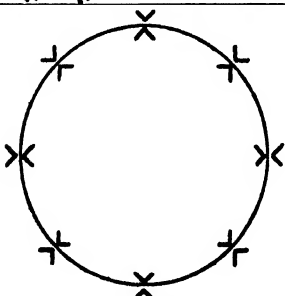
SINGLE CIRCLE
Partners facing



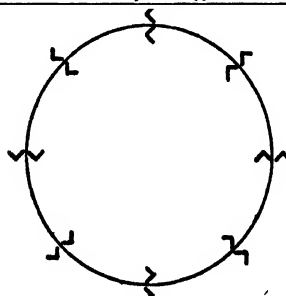
SINGLE CIRCLE
facing Right - Counter Clockwise



DOUBLE CIRCLE
Partners facing Center



DOUBLE CIRCLE
Partners facing



DOUBLE CIRCLE
Partners facing Right - Counter Clockwise



ZIG - ZAG



LINE

and stronger members of society controlled the smaller and weaker members. Children were directed and controlled by the authority of adults. The church, the home, and the school as social institutions provided a discipline which was authoritative. The discipline of the church, the home, and the school has changed. In place of the older form of authoritative control has developed a socialized disciplinary program of helping each boy and girl to develop definite and objective guides to living. In schools an accepted ideal is to develop in each pupil the ability to discipline and control himself. Self-control is recognized as a necessary trait for really successful living in a democracy. Autocratic discipline which depends on external authority is recognized as being out of place in modern society.

School discipline is a type of social control within the school group. It should be a constructive educational force and not merely a means of keeping children regimented in order that subject matter may be presented to them. It should train children to conform to reasonable social restraints and directions. It should also instill in all pupils a sense of responsibility for the public good. It does not seem probable that these two objectives can be achieved through "preaching at" children or through the traditional type of classroom instruction. They can be accomplished by providing a wide variety of situations in which the pupils may have meaningful experiences in self-control and in social control. A negative type of discipline, which exemplifies the process of "sitting on the lid," will not help children to develop the ability to act on a high social and moral level.

Methods of maintaining discipline. When pupils are participating in interesting activity, study, or discussion discipline will not arise as a problem in the class. It is fundamental, therefore, that a teacher select subject matter, methods of teaching, and techniques of class organization which will cause the pupils to keep interestingly engaged during the entire class periods. The personality of the teacher is an important factor in maintaining good discipline. A teacher should strive to develop a type of personality which will be pleasing and agreeable to the children. A dominating type, which submerges the individuality of the pupils, would probably result in good order in the class but would not be stimulating to pupil growth. Restraint and domination of the pupils by the teacher is an undesirable way of developing discipline. The teacher's responsibility should be to stimulate and help the boys and girls in the solution of the problems of their social group. In cases of discipline the teacher should help the pupil to analyze the social implications of his behavior and to conduct himself in a way that will not violate accepted standards of morality. It should also be recognized that a violation of the stand-

ards of good behavior by an individual is not merely a matter of concern in regard to a particular individual—nearly all such cases are of social significance and should be considered in connection with the entire class or group.

The efficiency of routine class procedures determines the discipline of a class in many cases. The methods of issuing towels, baskets, and soap may have some influence on the conduct of pupils. Waste of time in taking the roll, inspecting uniforms, and starting the class activity is conducive to misbehavior. The class should be well organized and all materials and equipment should be in good condition and conveniently available. All courts and play fields should be accurately marked.

Rules arbitrarily laid down by the teacher more or less invite pupils to violate them. As a usual thing teachers should avoid making rules. It is preferable for the necessary regulations to be formulated by the class after ample opportunity has been provided for investigation and discussion.

When pupils of different ages, sizes, and abilities, are in the same class it is difficult to plan a program and conduct the class in such a way that it will be interesting to all the pupils. This sometimes results in disciplinary problems.

It is recommended that for the purposes of physical education pupils be placed in homogeneous groups according to size and ability.

Discipline suited to moral level of pupils. It would be difficult to stop, by authoritative and autocratic methods, the stealing of athletic goods or other articles in a group whose social ideals are not contrary to stealing. If every boy in such a group who stole some article were summarily expelled from school the opportunity would be lost to improve the ideals and strengthen the character of a large number of boys. The schools would be missing an opportunity to be of the most service to the community. The teacher of physical education should begin his educative disciplinary efforts on the level on which he finds his pupils and should work diligently to raise their standards of social and moral behavior. In a situation where the stealing of equipment and supplies is likely to occur the teacher should organize and administer his program in such a way that it would be almost impossible for a pupil to steal without being detected. The administration should not be so lax that a pupil can steal and have his act result in satisfaction. It is wrong for a teacher to place pupils in situations that will be conducive to the development of immoral and anti-social traits of character.

Discipline adapted to natural tendencies of pupils. The natural tendencies of boys and girls will find some way of expression. School

discipline may concern itself primarily with repressing these original qualities. It should pursue the wiser course of seeking to provide activities which will permit the exercise and expression of the innate drives or urges of the pupils.

Discipline based on activity of pupils. Discipline of the better kind is the result of interesting activity by the pupils. It should not be a direct objective of the pupils but should be an inherent part of the meaningful experiences which they are having. Take, for example, a group of boys who were practicing basketball and were interested in improving their playing ability. It would be easy for them to see that "horse-play" by members of the group would interfere with the effectiveness of the practice period. Good discipline would naturally be a part of the experiences themselves. This form of discipline is constructive and really contributes to the education of children. It is much to be preferred to the type of discipline which is dependent on the display of authority.

The importance of highest motives in discipline. The highest type of motives on which discipline can be based is the whole-hearted interest of the pupils in the activities of the curriculum. When pupils are eager to learn they will not tolerate bad conduct on the part of any members of the group because it interferes with the most efficient learning by the class. The social pressure of the group in such cases demands good discipline.

The next plane of discipline is that secured by means of the dominating personality of the teacher. Frequently a teacher can demand good discipline, by the force of his personality, in a group which has failed to show any natural interest in the activities of the school curriculum. Discipline secured in this way is not so desirable as that which is an inherent part of the activities themselves.

The lowest type of motive which may be appealed to in order to secure discipline is that of force or fear. Discipline based on this kind of motive is not of great value in the education of persons for life in a democracy. It is probable that there might be an occasional group of pupils whose past training and experience has been such that fear is the only motive to which they will respond. They may not be able to comprehend an appeal on any higher plane. In such rare cases a teacher may be justified in using this motive in order to conduct the class for the first few periods. No teacher should find it necessary to depend on force or fear over a protracted period of time to secure good discipline.

Specific disciplinary techniques. There are a number of specific devices used by teachers that help to secure good discipline. Some of these techniques are of more value and are applicable to a wider

variety of situations than are others. Some of the more common disciplinary devices are discussed in the following paragraphs.¹

1. Overlook minor acts of misbehavior. In cases where the misbehavior is not of a serious nature, does not interfere with other members of the class, and does not occur frequently, it may be a good plan to overlook it. Serious cases of bad conduct should never be ignored.

2. Give children "tongue lashings" and scold them in abusive language. Such procedures should be avoided. It is cowardly in that the teacher is taking unfair advantage of the pupils who cannot defend themselves. The respect of the pupils for the teacher is lessened and the self-respect of both pupils and teacher is lowered. Any teacher or coach who persists in such practices and who goes to the extreme of using profanity should be discharged from his position and prohibited from teaching.

3. Administer corporal punishment. A teacher of physical education should never whip or shake a child. It is probably advisable never to touch a pupil in connection with disciplinary measures, if it can possibly be avoided.

4. Require pupils to remain at school after school is dismissed or require them to do extra practice. Every effort should be made to avoid building in the minds of the pupils a conception that the school and its work are fundamentally disagreeable. It should be made clear to all children that if a teacher gives his time and remains after school with pupils it is for the purpose of helping them and not of punishing them. Children should be encouraged to study in order to secure interesting and valuable information which might be of help to them in doing better the things in which they are interested. Study and practice should certainly not be presented as a form of punishment. Some athletic coaches make a serious mistake by requiring players to tackle the dummy an extra number of times or do other fundamental skills as punishment. All parts of the learning process should be made as pleasing and satisfying as possible. Additional practice should not be required as punishment.

5. Threaten pupils with punishment. Pupils should not be threatened with punishment. If any punishment is believed to be necessary it should be meted out to the offender promptly and impartially.

6. Be sarcastic in correcting pupils. The use of sarcasm and ridicule by the teacher should be condemned. It discourages freedom of action and of expression on the part of the pupils. It is rude, unfair, and inconsiderate for a teacher to belittle the efforts of a

¹ Charles Everard Reeves, *Standards for High School Teaching*, pp. 85-88. New York: D. Appleton and Company, 1932.

child. Teachers should be cautious in their efforts to be witty or clever in the classroom, in the gymnasium, or on the athletic field. Frequently what a teacher intends as a joke sounds like ridicule to the pupils.

7. Deprive pupils of privileges. If the misconduct has been directly connected with the privileges withdrawn, this procedure is justifiable. But it would not be right, for example, to withdraw the privileges of the swimming pool or gymnasium from pupils who failed to buy a textbook in history or who were boisterous in the school cafeteria.

8. Deprive a whole class of certain privileges to punish an unknown few. In most cases this form of disciplinary procedure should not be used. Some persons insist that if most of the members of a class oppose bad behavior the force of their social pressure will deter the few who would misbehave. This is true in many situations but the way schools are organized and administered and the social codes of school children interfere with the natural operation of this theory. Punishment by the teacher should not be imposed on all the members of the class as a consequence of the misconduct of a few individuals in the class.

9. Exclude pupils from classes. To send pupils who misbehave to the principal's office is an admission by the teacher that he cannot discipline his class. Every reasonable effort should be made to interest a pupil in the class work and discipline him by means of social pressure in the group before he is dismissed from the class or sent to the principal.

10. Require a pupil, who has misbehaved, to apologize to the class. If a pupil sincerely wishes to apologize to the other members of the class for any annoyances or inconveniences which he has caused, he should be permitted to do so. For the teacher to force an apology does no good and serves to humiliate the pupil and possibly to generate a rebellious spirit in him.

11. Speak in a commanding tone in order to demand attention. To do this merely adds to the disorder. Teachers should speak in a clear distinct tone and should not try to talk in competition with the pupils. In the gymnasium and on the play field every teacher should use a whistle. The class should understand that the blast of the whistle calls for quiet and attention.

12. Use rewards for good conduct and good work. Good conduct should be a natural part of the class situation. Pupils should not be rewarded for being good, they should be expected to act all the time in a way that would not interfere with the learning of others. Good work of pupils should be commended but the praise should be de-

served and sincere. Commendation should not be given for work which has not called forth serious effort on the part of the pupils.

13. Arouse the interests of pupils. This is a somewhat general statement but it is fundamental to good discipline. Challenging the interest of pupils involves the selection of activities, methods of class organization, and methods of teaching. A teacher, who is able to conduct his classes in a way that will hold the interest of the pupils will have solved most of the disciplinary problems.

Summary. The principal of each school should be responsible for the entire school program, including physical education. It has been found to be a good plan to have one person as head of the department of physical education in each school. In elementary schools where the physical education is taught by the classroom teachers it has been found to be satisfactory for all the grades to have physical education at the same time. Schools that have tried this plan of organization report that it has many advantages. This plan is recommended particularly for schools that do not have adequate gymnasium, showers, and locker facilities. Pupils should be assigned to physical education classes on the basis of the results of a medical examination and a battery of tests. In order to do this it is necessary in most schools for pupils to place physical education on their schedules before they choose the hours for the academic subjects. Parents who insist that their children be excused from the required classes in physical education sometimes present annoying administrative problems. Every reasonable effort should be made in every school to provide a program of physical education suited to the needs and abilities of each individual child. A method, which has been used successfully in meeting problems of this kind, is to request the parents who ask that their children be excused from physical education to have a licensed physician of their own choice furnish the school authorities with a diagnosis and prescription for each child. Printed forms are useful for this purpose.

A tentative class organization should be perfected promptly on the first day of school. This action will facilitate the permanent organization of the class, the administration of placement tests, and the prompt initiation of the regular class routine and instruction. A routine for each class should be established as soon as possible in order to make habitual the acts which are repeated in the same way every day. The method of having squad leaders check the attendance in their squads is recommended as the most satisfactory way for taking the roll call in most situations. In schools where lockers are assigned to pupils a well organized business-like method must be adopted for assigning lockers and keeping the records.

Towels and suits may be furnished by each pupil or supplied by the school. It simplifies the administration of classes if the school owns and launders all the suits and towels. It is particularly important that the school own and launder all bathing suits which are used in the school swimming pool.

In most high schools and colleges it is desirable and practicable for each pupil to wear a suitable uniform during the physical education periods. The care, arrangement, and availability of supplies and equipment and the organization of the pupils for class participation are important factors in the successful administration of a physical education class. The organization of a class into squads of about eight to twelve pupils of approximately equal ability in each squad is a good method of organizing classes. There should be a squad leader in charge of each squad.

Some of the class formation which each squad may use in the practice of motor skills and for contests and relays include variations of such formations as the circle, zigzag, line, file, and shuttle.

School discipline has a great educational significance and should not be considered merely as means of keeping children quiet and orderly so that subject matter may be presented to them. School discipline is a type of social control within the school group. The best method for maintaining discipline in classes is for the teacher to select subject matter, techniques of teaching, and methods of class organization which will cause the pupils to participate in interesting activity.

QUESTIONS

1. How may a physical education class in a junior high school be organized the first day of school?
2. What are the things which should be reduced to a class routine?
3. What are some methods of taking the class roll each day in a physical education class?
4. Describe some satisfactory systems of assigning lockers to pupils.
5. What are some methods of distributing towels and suits to physical education classes?
6. What uniforms are suitable for boys and girls in physical education classes?
7. How may a class be organized into squads for class work?
8. How may physical education be organized in an elementary school where the physical education is taught by the classroom teachers? What are the advantages of this type of organization?
9. What is a good way of meeting the problem caused by parents' requesting that their children be given exemption from the required work in physical education?
10. What is the educational significance of school discipline?
11. What characteristics of the pupils should receive special attention in connection with a consideration of school discipline?

12. What are some of the ways in which specific disciplinary techniques can be used in connection with teaching physical education?

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CHAPTER XIV

THE CLASSIFICATION OF PUPILS AND ORGANIZATION OF COMPETITION

The purpose of classification. The purposes of the classification of pupils for physical education have been stated as safety, equalization of ability, and universal participation.¹ If pupils are placed in homogeneous groups for participation in physical education it is easier to administer the classes in such a way that each child will take part in activities suited to his needs and abilities. This will obviate the danger of children being injured by taking part in events that are too strenuous for them. Classification also serves the purpose of equalizing ability within relatively narrow ranges. It is almost impossible and entirely impracticable to equalize ability completely. A person may be a poor basketball player, an excellent swimmer, and a mediocre baseball player. It is practicable, however, to place children in classes in which the range of ability is limited. When this is done it makes possible an approach to the ideal of universal participation. In order for a person to continue taking part in an activity he must get some satisfaction from it. A reasonable degree of success is necessary if one is to get satisfaction from participation. The classification of pupils enables each child to participate and compete with others whose abilities are approximately equal to his. He will, therefore, achieve success in the activities equal to that of his fellows and will be interested and eager to participate because it provides pleasure and satisfaction.

The methods of classification. The method used for the classification of pupils for physical activities should provide first of all for a medical examination of all pupils. This is necessary to make certain that the physical and emotional condition of each pupil is such that he will not likely be injured by a normal type of participation in physical activities. It is a good practice to have the medical examiners classify the children into three classes. The first class should include all who can take part in unlimited activity, the second class the children who should participate only in a restricted activity program, and the third class the pupils who should be protected from all possible activity of any kind.

¹ Jay B. Nash, *The Organization and Administration of Playgrounds and Recreation*, p. 260. New York: A. S. Barnes and Company, 1927.

It is desirable to place the normal pupils in groups of approximately equal ability so as to stimulate universal participation in the activities. Most of the plans used for classification of boys and girls in physical activity groups have been based on weight, height, age, grade, or a combination of two or more of these factors.

The Atlantic City Method. In Atlantic City¹ the following plan is used for the classification of elementary school boys and girls into three groups in each grade. Its proponents claim that in a general way this plan equalizes the ability of the groups.

Fifth Grade

Junior—under 11 years—under 75 pounds.

Senior—under 11 years—under 85 pounds.

Unlimited—12 and over—85 pounds and over.

Sixth Grade

Junior—under 12—under 85 pounds.

Senior—12—under 95 pounds.

Unlimited—13 and over—95 pounds and over.

Seventh Grade

Junior—under 13—under 95 pounds.

Senior—13—under 105 pounds.

Unlimited—14 and over—105 pounds and over.

Eighth Grade

Junior—under 14—under 95 pounds.

Senior—14—under 105 pounds.

Unlimited—15 and over—105 pounds and over.

There will be some pupils who will not fall into any one of the above classes, *e.g.*, a fifth grade boy may be 12 years old and weigh less than 75 pounds; or he may be under 11 and weigh more than 75 pounds. In these cases, age should be the determining factor.

Classification in the Y.M.C.A. The Young Men's Christian Association uses a method of classification which takes into account age and weight. The classifications are:

Class I—All twelve-year-old boys under 81 pounds.

Class II—Thirteen-year-olds over 81 pounds and fourteen and fifteen-year-olds under 96 pounds.

Class III—Fourteen and fifteen-year-olds over 96 pounds, sixteen and seventeen-year-olds under 111 pounds.

¹ *Competitive Games in the Elementary Schools*, pp. 12-13. Atlantic City, New Jersey: Board of Education.

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Class IV—Sixteen and seventeen-year-olds over 111 pounds.

Class V—All eighteen-year-olds.

Class VI—Young men eighteen to twenty-five years.

Class VII—Younger business men twenty-five to thirty-five years.

Class VIII—Older business men thirty-five to forty years.

Class IX—Over forty years.

The Reilly Method. The method devised by Reilly¹ has been modified and adapted in a number of different situations and has proved to be a satisfactory and practical method for the classification of boys and girls. The method as originally suggested by Reilly took into consideration grade, age, height, and weight; but some of the revisions use only age, height and weight. It seems that grade is not a vitally important factor. Cozens and Neilson² report that the height-age-weight classification used in California agrees closely with the classification obtained by McCloy's formula: $20A$ (in years) $+ 6H$ (in inches) $+ W$ (in pounds); and that it agrees closely with the results obtained by the Pan-Pacific Junior Pentathlon formula: $.77A$ (months) $+ 2H + .46W$.

The classification chart included in the California state course of study is reproduced on the opposite page. This chart has been found to be valuable in the classification of pupils for participation in physical activities. The following example illustrates its use.

Example: A pupil—

whose height is 54 inches—exponent for height is 4

whose age is 12 years, 8 months—exponent for age is .. 6

whose weight is 83 pounds—exponent for weight is 5

Sum of exponents is 15

Pupil is in Class C.

Andersen's Chart. Andersen³ has proposed a chart for the classification of elementary school boys and girls which divides the elementary school grades into three classes. The pupils in the third and fourth grades are the junior class; the fifth and sixth grades are the intermediate class; and the seventh and eighth grades are the senior class. In school systems that have a junior high school and have only six grades in the elementary school there would be only two classes in the elementary school. This chart should be familiar

¹ Frederick J. Reilly, *New Rational Athletics for Boys and Girls*. Boston: D. C. Heath and Company, 1917.

² Frederick W. Cozens and N. P. Neilson, "Age, Height, and Weight as Factors in the Classification of Elementary School Children," *Journal of Health and Physical Education*, III (December, 1932), 21.

³ Leonora Andersen, *An Athletic Program for Elementary Schools*, p. 110. New York: A. S. Barnes and Company, 1927.

CALIFORNIA STATE DEPARTMENT OF EDUCATION

CLASSIFICATION CHART¹*Boys and Girls*

<i>Exponent</i>	<i>Height</i>	<i>Age</i>	<i>Weight</i>	<i>Exponent</i>	<i>Sum of Exponents</i>
1	50-51	10:0-10:5	60-65	1	9 and below A
2	52-53	10:6-10:11	66-70	2	
3	.....	11:0-11:5	71-75	3	
4	54-55	11:6-11:11	76-80	4	10-14 B
5	.....	12:0-12:5	81-85	5	15-19 C
6	56-57	12:6-12:11	86-90	6	
7	.....	13:0-13:5	91-95	7	20-24 D
8	58-59	13:0-13:11	96-100	8	
9	.....	14:0-14:5	101-105	9	25-29 E
10	60-61	14:6-14:11	106-110	10	
11	.....	15:0-15:5	111-115	11	30-35 F
12	62-63	15:6-15:11	116-120	12	
13	.....	16:0-16:5	121-125	13	35-38 G
14	64-65	16:6-16:11	126-130	14	
15	66-67	17:0-17:5	131-133	15	39 and above H
16	68	17:6-17:11	134-136	16	
17	69 and	18 and over	137 and	17	
	over		over		

¹ N. P. Neilson and Winifred Van Hagen, *Manual of Physical Education Activities for the Elementary Schools of the State of California*, p. 29. Sacramento, California: State Printing Office, 1929.

to persons who have the responsibility of classifying boys and girls for physical education activities.

The Detroit Method. In the elementary schools of Detroit the children are classified into three groups, Senior, Junior, and Juvenile, on the basis of grade in school. In each group there are four classes based on combination of age and weight. The following plan of classification is quoted from the *Detroit Athletic Manual* of the elementary athletic association for 1930-1931.

To find the classification number, multiply the age by 8 and add the weight ($8A + W$).

Senior

220 and over	Class 1
205-219	Class 2
190-204	Class 3
189 and under	Class 4

Junior

205 and over	Class 5
185-204	Class 6
165-184	Class 7
164 and under	Class 8

Juvenile

170 and over	Class 9
160-169	Class 10
150-159	Class 11
149 and under	Class 12

The Senior Group includes all grades up to and including the eighth.

The Junior Group includes all grades up to and including the sixth.

The Juvenile Group includes all grades up to and including the fifth.

Age is taken as of the beginning of the semester.

Weight is taken during the week prior to the time entry blanks are due in the office.

McCloy's Classification Indices. McCloy has made studies of the relative contributions that chronological age, physiological age, school grade, height, and weight make to the prediction of performance ability of boys in track and field athletics. His most significant findings¹ were as follows:

1. Chronological age is an important contributing factor up to and including the age of seventeen. Beyond that age it does not seem to be significant when allowance is made for height and weight.

¹ Charles Harold McCloy, *The Measurement of Athletic Power*, pp. 94-95. New York: A. S. Barnes and Company, 1932.

2. Physiological age, if added, would probably add about 5 per cent to the accuracy of prediction. As yet, however, no method of utilizing this attribute quantitatively has been devised, and it is ignored in this study.

3. School grade is found to add nothing of importance to the predictive value of the best combinations of chronological age, height and weight.

4. Height at ages of fourteen and below seems to contribute very little—when *several events* are combined—that is not adequately cared for by age and weight. In the case of *individual events*, however, height has significance at age levels below this. Above the age of fourteen height is more significant than either age or weight, and should probably be included at all ages covered by this study (ten to twenty).

5. Weight is of great significance at ages of fourteen and below, and of relatively less significance above this age. It should, however, be included at all ages.

6. Body build seems to be of no significance when chronological age, height and weight are included according to their “best” weightings.

7. After a variety of experiments with different methods of approach, three formulæ are proposed for the purpose of using the variable age, height and weight as classifying and handicapping devices for boys. The best of these are:

(1) $20A + 6H + W$ (Classification Index I)

This formula is of use at all ages that engage in competitive athletic activities. Ages above seventeen are counted as seventeen.

(2) $6H + W$ (Classification Index II)

This formula is for use where all students are seventeen and over; namely, the college range.

(3) $10A + W$ (Classification Index III)

This formula is for use in the elementary school for ages fifteen and below. It is not quite as good a formula as Classification Index I but is more convenient to use.

It is advisable that Classification Index I should be used throughout. In order that it may be utilized to the full, and since there are curvilinear relationships between all three of these formulæ and performance, tables have been prepared by which the formula may be readily computed and converted into predicted normal performance scores. [These tables are found in the Appendix of McCloy's book.]

It has been pointed out by McCloy that it would not be a good plan to take the total range of the classification index and divide it equally into any given number of steps, for the two extremes given have very few individuals in them. He has taken the range and divided it into steps or divisions so that each group has approximately

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the same number of individuals in it. His proposed groupings for the classification indices, secured by the use of his Classification Index I, are given in the following table:

TABLE III
PROPOSED DIVISION FOR CLASSIFICATION INDICES

Classification Index I—Elementary School

Range 515-875

<i>Class</i>	<i>For a small group</i>	<i>Class</i>	<i>For a larger group</i>
A	800 and over	A	800 and over
B	770	B	775
C	740	C	750
D	710	D	725
E	680	E	700
F	650	F	675
G	620	G	650
H	619 and under	H	625
		I	600
		J	599 and under

Classification Index I—Junior High School

Range 540-900

<i>Class</i>	<i>For a small group</i>	<i>Class</i>	<i>For a larger group</i>
A	875 and over	F	725
B	845	G	695
C	815	H	665
D	785	I	664 and under
E	755		

Classification Index I—High School

Range 685-955

<i>Class</i>	<i>For a small group</i>	<i>Class</i>	<i>For a larger group</i>
A	890 and over	A	900 and over
B	860	B	875
C	830	C	850
D	800	D	825
E	770	E	800
F	740	F	775
G	739 and under	G	750
		H	725
		I	724 and under

The proposed indices have been worked out on the basis of ability of boys in track and field athletics. It is probable, however, that these same indices will serve to classify boys satisfactorily and conveniently for other activities and they should be used for this purpose until better indices are developed. McCloy's Classification Index I seems to be the most practical and satisfactory method now available for classifying normal boys for participation in physical activities.

Methods of organization for mass competition. In conducting competitive events in the regular physical education classes or during field days and play days it is desirable to organize the competition in a way that the largest possible number of children may take part. In connection with competition in team games the solution of the problem is met by classifying the pupils into homogeneous groups and arranging schedules and tournaments which involve the largest possible number of teams. In track and field events it is likewise desirable to classify the pupils into homogeneous groups for competition.

In order to provide for competition between large numbers of contestants in a reasonable length of time it is necessary to modify the traditional methods of conducting track and field contests. Some of the events that lend themselves readily to use in mass participation are runs and dashes, broad jump, high jump, "hop, step, and jump," chinning, push up, sit up, football kick, baseball throw, basketball throw, shot put, and potato race.

Mass competition in running. Running may be most easily conducted on a mass basis in the form of relays. These may be circle, file, or shuttle relays. One method of conducting dashes is to have as many heats as there are boys or girls on each dash team. For example, if there were eight boys representing each school in the hundred yard dash, eight heats would be run. The judges should pick the first, second, and third runners in each heat who should be awarded points of 5, 3, and 1 respectively. The team which won the greatest total number of points in all eight heats should be declared the winner of the hundred yard dash. On the occasion of field days or meets five points should be awarded to the winning team to count towards the complete score.

The method of conducting dashes in this way would require that there be as many lanes as there were teams. Each team should line up in single file in its lane with the number 1 runner in front. Assume, for example, that there are five teams of eight runners to the team. Upon a signal from the starter the first runner of each team takes his place on the starting line and the race is started in the usual manner by the commands—On your marks! Get set! Go! (or shot

of pistol). The judges at the finish line pick the runners who finish first, second, and third and record the necessary facts immediately on their writing pads. As soon as the first runner of each team leaves the starting line the second contestant steps forward and takes his place. The head judge signals the starter as soon as the winners of the first heat have been picked and the facts recorded on the judges' pads. This procedure continues until all members of the teams have run, which in this case is eight. The judges' score sheet would probably look something like the following chart.¹ The totals show that team A with 18 points won first place in the hundred yard dash, team B with 16 points won second place and team D with 15 points won third place.

	<i>Teams</i>				
<i>Heats</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
1	5	..	3	..	1
2	3	5	..	1	..
3	..	1	5	..	3
4	..	3	..	5	1
5	..	5	1	3	..
6	5	1	..	..	3
7	5	..	..	3	1
8	..	1	..	3	5
Total	18	16	9	15	14

A zone method of conducting dashes which has been described by Brace and Pinckney² and by McCloy³ is especially valuable when it is necessary to determine the time of each runner.

Mass competition in jumps and throws. The jumps and throws may be conducted successfully on a mass basis by a shuttle method, zone method, elimination method, or accumulative method.⁴ When the shuttle method is used only two teams, of equal numbers, can compete against each other at any one time. The competition is conducted by establishing a base line near the center of the play space. In the case of the standing broad jump, for example, the

¹ State Board of Education, *School and Community Field Days*. Hartford, Connecticut: State Board of Education, 1928.

² David K. Brace and J. M. Pinckney, *Manual of Physical Education for Elementary Grades*, p. 27. Austin, Texas: Division of Extension, University of Texas, 1930.

³ Charles Harold McCloy, *The Measurement of Athletic Power*, pp. 107-110. New York: A. S. Barnes and Company, 1932.

⁴ David K. Brace and J. M. Pinckney, *Manual of Physical Education for Elementary Grades*, p. 27. Austin, Texas: Division of Extension, University of Texas, 1930.

first jumper from Team A toes the base line and jumps as far as he can across the base line and the official marks the point of contact (with the floor or ground) farthest behind the jumper. The first jumper from Team B then places his toes at this point and jumps toward the base line. The members from each team take alternate jumps. The event is won by the team whose station is on the opposite side of the base line from the position reached by the last jumper. When competition in the shot put is conducted by the shuttle method the "shot put without turn" should be used. This means that a right-handed person should place his left foot on the mark made by the shot which was "put" by his opponent. The right foot may be raised during the "put" but it must not be moved in front of the mark on which the left foot is resting.

The zone method is used by measuring and marking zones at different distances from the base line or throwing circle. Each zone is assigned a point value and any contestant who finishes in any zone earns the points for that zone. The zones at the greater distances from the starting point should have the larger point values. In marking zones for throwing events arcs should be described with radii of different lengths. The width of each zone should be about $\frac{1}{20}$ of the standard distance which is decided on for each event.

The elimination method in the basketball throw for distance, for example, is conducted by drawing a line on the ground or on the floor of the gymnasium over which most of the children can throw the ball while standing back of the starting line. The distance between the lines should be increased for each new round. When a child fails to throw the ball across the line he is eliminated. The last person to be eliminated is the winner. This method is applicable to most throwing and jumping events.

The accumulative, or file, method requires each team to line up in single file. That is, the members of each team are behind one another. Each team is in a separate lane or zone and the first player of every team is behind the same starting line. In a jump, for instance, the first pupil in each lane jumps and then walks to the other end of the play area. The second pupil jumps from where the first pupil landed and then joins the first jumper, the third pupil jumps from the point where the second pupil landed, and so on until all the members of each team have jumped. The team which jumps the greatest total distance wins the event. The different jumping and throwing events may be successfully conducted by this method.

The organization of tournaments. Tournaments provide the means for the organization of a series of games in such a way as to include a large number of pupils. The "Round Robin," the elimina-

tion, the elimination-consolation, and the ladder or perpetual tournaments are the ones used most often.

Before tournaments are arranged pupils should be classified into homogeneous groups. Then the competition should be planned between teams of approximately equal ability.

TOURNAMENT SCHEDULES

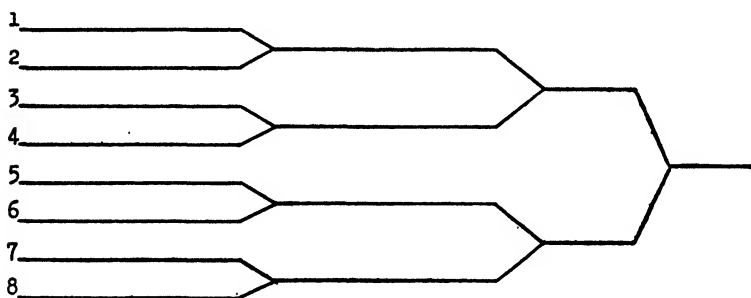
THE ROUND ROBIN TOURNAMENT SCHEDULE GUIDE

	Three Teams	Four Teams	Five Teams	Six Teams	Seven Teams	Eight Teams
First Series	1-2 (3) ¹ ...	1-2 3-4 ...	1-2 3-4 (5)	1-2 3-4 5-6	1-2 3-4 5-6	1-2 3-4 ...
Second Series	1-3 (2) ...	1-3 2-4 ...	1-3 2-5 (4)	1-3 2-5 4-6	1-3 2-5 4-7 (6)	1-3 2-4 ...
Third Series	2-3 (1) ...	1-4 2-3 ...	1-5 2-4 (3)	1-4 2-6 3-5	1-4 2-6 3-7 (5)	1-4 2-3 ...
Fourth Series .....	...	...	1-4 3-5 (2)	1-5 2-4 3-6	1-5 2-7 3-6 (4)	1-5 2-8 ...
Fifth Series .....	...	...	2-3 4-5 (1)	1-6 2-3 4-5	1-6 2-4 5-7 (3)	1-6 2-5 ...
Sixth Series .....	...	...	...	...	1-7 3-5 4-6 (2)	1-7 2-6 ...
Seventh Series .....	...	...	...	...	2-3 4-5 6-7 (1)	1-8 2-7 ...

Round Robin Tournament. A "Round Robin" tournament provides a schedule so that each team or individual plays every other team or individual one or more times. If there are more than eight

¹ Teams in parenthesis indicates a bye (idle day) for that series.

contestants it is usually considered advisable to divide the entrants into two leagues or groups and arrange a schedule for each group. The winners of the groups may later play for the championship. The rank of a contestant in a "Round Robin" tournament is determined on a percentage basis. To determine the standing of a contestant at any time, divide the number of games won by the total number of games played. The division should be carried out to three places so as to get the "percentage" in terms of thousandths. In this type of tournament no contestants are eliminated and all participants, whether they win or lose, play through to the end. It is relatively easy to make a schedule for a "Round Robin" tournament by substituting names of teams or individuals for the numbers in the outline on the opposite page proposed by Oberteuffer.¹ After the names have been substituted for the numbers, all that remains to be done is to arrange the time and place for each game. Detailed directions for preparing "Round Robin" schedules are given by Williams² and by Brace and Pinckney.³



The elimination tournament. The elimination tournament is familiar to most people because it is the type generally used in basketball and tennis tournaments. Its main value is that a large number of teams can play and a winner be chosen in a short period of time. Its disadvantage is that a team is eliminated as soon as it is defeated, and thus many of the teams play only one game. In planning an elimination tournament a skeleton tournament diagram should be made. The arrangement of the diagram and of the tournament is easier if the number of teams participating is a perfect power of two (that is 4, 8, 16, 32, etc.). The above diagram shows the set-up

¹ Delbert Oberteuffer, *A Program for Junior and Senior High Schools*, p. 80, *Health and Physical Education Series of the State of Ohio, Department of Education*, Vol. III. Columbus, Ohio: State Department of Education, 1932.

² Jesse Feiring Williams, *The Organization and Administration of Physical Education*, p. 205. New York: The Macmillan Company, 1933.

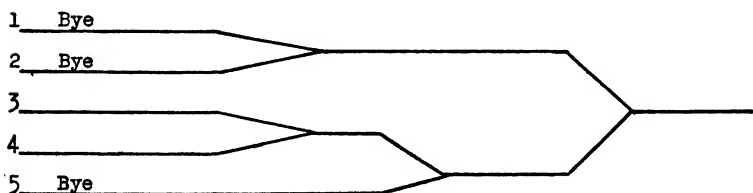
³ David K. Brace and J. M. Pinckney, *Manual of Physical Education for Elementary Grades*, p. 28. Austin, Texas: University of Texas, 1930.

for a tournament with eight teams. Since eight is a power of two no "byes" are necessary.

The order in which the names are placed on the tournament diagram should be determined by chance in most cases. In order to do this the name of each contestant or team should be written on a separate slip of paper. These slips should be placed in a box or other container and thoroughly mixed. Then some disinterested person should draw out the slips one at a time. The first name drawn should be written on line number one of the tournament diagram, the second name on the second line, and so on until all the names have been drawn. In some instances the names of contestants are placed on the tournament diagram by a committee rather than as the result of a chance drawing. This is done in order to make certain that some of the stronger opponents meet in the finals.

The two contestants whose names are on the same bracket should play each other at the time and place specified for the game. The name of the winner of each match should be placed on the line extending from the center of each bracket and forming one-half of another bracket. This procedure should be followed until only one team remains undefeated. This undefeated contestant should be declared the winner of the tournament.

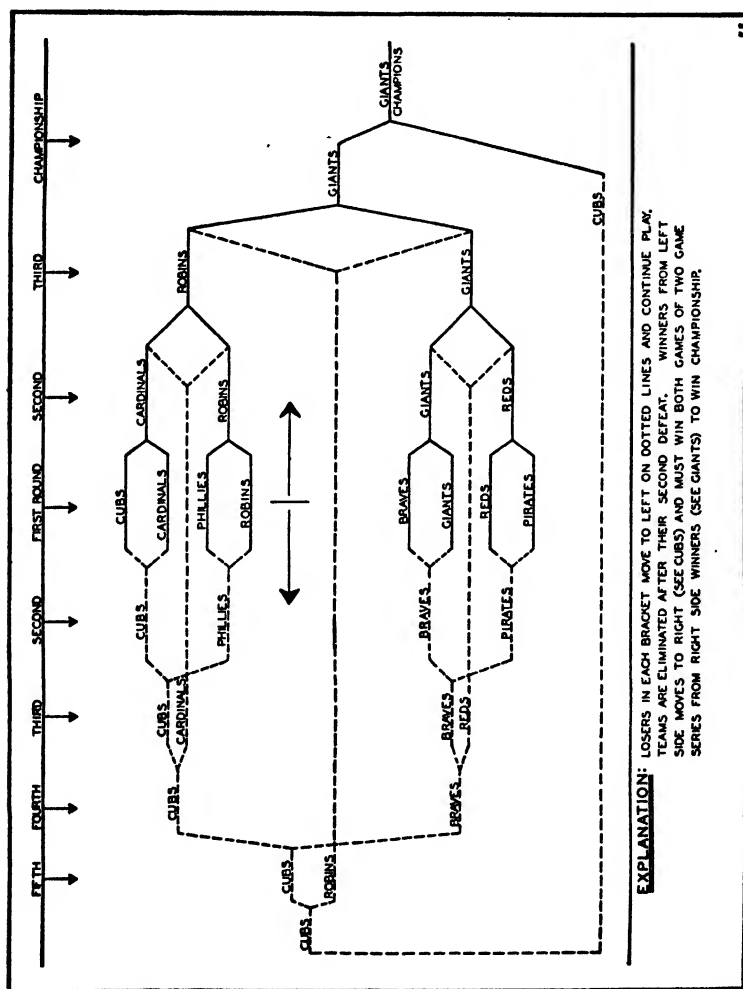
The following diagram shows an arrangement for a tournament with five contestants. Since five is not a power of two, there are needed three "byes" which leaves two contestants to play the preliminary round.



If the number of contestants in an elimination tournament is not a perfect power of two, a preliminary round must be played by some of the contestants in order to reduce the number to a power of two. The contestants who do not play the preliminary round are said to be "byes," and are chosen by means of a chance drawing. The number of "byes" in a tournament is determined by subtracting the number of contestants from the next larger number which is a power of two. For example, if there were seven contestants, this number should be subtracted from eight which would give one "bye," thereby leaving six teams to play the preliminary round. If there

were thirteen contestants, three would draw "bye" since thirteen would be subtracted from sixteen, which is the next higher power of two. In this case with three "byes" there would be ten contestants to play the preliminary round. The "bye" positions should be distributed as equally as possible between the upper and lower lines on the tournament diagram.

The elimination-consolation tournament. The elimination-consolation tournament is planned in the same way as the elimination



tournament except that the losers in each game, up to the final game, take part in a consolation tournament. This makes it necessary for a contestant to be defeated twice before he is finally eliminated. The winner of the consolation tournament plays the winner of the regular tournament for the final championship. The diagram on page 249 shows how a tournament of this kind is arranged.¹

The ladder tournament. The perpetual or ladder tournament may be arranged by placing the names of the entrants on the ladder in the order in which they are drawn in a chance drawing. A common method of setting up a ladder tournament is to type the name of each contestant on a card about 2 inches long and $\frac{1}{2}$ inch wide. A small hole is punched at each end of each card, and the cards are hung in the correct order on small finishing nails which are driven into a short piece of 1 x 12 inch board. This arrangement makes it easy and convenient to rearrange the order of contestants after each game. For example, the names of boys in a ladder tournament may be arranged in the order drawn as follows:

John Smith
Bill Jones
Bob Brown
Will Green
Jim White
Sam Black

A person has the right to challenge either of the two players just above him on the ladder. Sam, for instance, may challenge Jim or Will. The challenge must be accepted within a stated period of time or the match forfeited. If the challenger wins by forfeit or by defeating his opponent he exchanges places on the ladder with the person he defeated. For example, if Sam wins from Jim they exchange places; if Sam wins from Will he takes Will's place and Will takes Jim's place. If, however, Sam loses the match he retains his place. The tournament continues in this way to the end of the time set for the contests. At this time the player at the top of the ladder is declared the winner.

Certain rules and regulations for conducting the tournament must be agreed upon in advance. The length of time the tournament is to run, the number of days within which a challenge must be accepted, and the number of games to constitute a match in events such as tennis and horseshoes are some of the rules which must be made.

The Dickinson system. A system for rating football teams devised by Dickinson has been used widely and has received a great deal

¹ *Ibid.*, p. 81.

of publicity because of its use in choosing a national football champion from among the college teams of the country.

The following summary describes the essentials of this rating system:¹

It will be seen that points which are awarded range from 10 to 30. Any other range might have been used. The points are incidental but there are four fundamental principles used in the system.

1. Tie games are considered as half-way won and half-way lost.
2. A strong team should receive the same credit for being defeated by another strong team as for being held to a tie by a weak team. (15 points was selected merely because it was convenient.)
3. For want of a better method the classification into first and second divisions is made on a percentage basis. Teams that have won more games than they have lost (whose percentage is above .500) are placed in the first division.

Dr. Dickinson states that he has spent much effort in trying to refine the basis of division but has found too many complications. He has, therefore, maintained the simple method given above. The following table gives the points awarded.

Points awarded for playing a first division team

Winning the game	30 points
Playing a tie game	22.5 points
Losing the game	15 points

For playing a second division team

For winning the game	20 points
Playing a tie game	15 points
Losing the game	10 points

4. A victory within a division counts twice as much as a defeat in that division. (Same rating as that used in chess, English soccer or polo.)

PROCEDURE

Under ordinary circumstances the procedure in determining the standing of a school at the end of a season would be as follows:

All teams in the conference should be placed in either first or second division depending on whether they have a percentage above .500. It should be noted that in case the percentage of a team is exactly .500 it should be placed in the second division unless at least one-third of its games have been against first division opponents and have resulted in at least one victory and one tie.

The number of points won for each game played as given in 3 above should

¹ "The Dickinson Football Rating System," *Illinois High School Athlete*, IV (October, 1931), 20.

be added and divided by the number of games played. The team with the highest average is ranked first.

The only possible exception to this is in case of an undefeated team which in very unusual circumstances might have fewer points than a team it had defeated. In such a situation the following rule applies: "An undefeated team shall always be ranked above any team it has defeated."

In case two teams have the same average points for the entire season the victor in any game played between them shall be ranked above the loser. If they have not played they remain tied.

If three teams have the same average points and two of them have met during the season, the loser shall be ranked third and the other two tied for the high rank.

UNUSUAL CASES

To take care of some unusual situations the following principles have been added to the original point system.

1. No team shall be penalized for a victory in an extra game. To avoid that, the extra game shall be omitted from the calculation. (Twenty points for an extra victory penalizes any team with an average of more than 20 for its other games.) However, the number of victories must never be thus reduced until they are fewer than the number of defeats or ties.

2. If two second division teams have won the same number of victories over first or second division teams but have lost a different number of games to first division teams, the extra defeats by first division teams shall be omitted from the calculation.

The sports calendar. The sports calendar is an important and valuable device in the administration of the physical education program. Such a calendar should be prepared for the entire school year well in advance of the opening of school in the fall. It should show the exact date on which each activity included in the program will begin and end; when all eligibility reports must be filed; when entry blanks for the different events must be mailed; when participation reports for each sport must be made; and must include all other dates which are important in conducting the physical education program. Separate calendars are usually made for boys and girls. These calendars should be read to all the students, posted on the school bulletin boards, published in the newspaper, published in the student handbook, and given as much publicity as possible in other ways. The following sports calendars for elementary school boys and girls in Detroit are illustrative of how they may be planned in elementary schools, high schools, or colleges.

SPORTS CALENDAR

Boys' ATHLETICS

1930-1931

- Sept. 22—Interscholar soccer season opens.
- Sept. 15—Intramural soccer season opens.
- Sept. 15 - Oct. 10—Decathlon test.
- Oct. 24—All interschool soccer games completed.
- Nov. 21—City championship soccer games completed.
- Nov. 21—Intramural soccer season ends.
- Dec. 1—Begin indoor track practice.
- Dec. 1 - Jan. 16—Stunt test.
- Jan. 5 - Jan. 16—Indoor track meets.
- Jan. 17—Skating meets.
- Feb. 9—Basketball season opens.
- Feb. 9 - Mar. 27—Intramural nine-court basketball, fistball and corner ball tournament.
- April 6—Begin work on seventeenth annual Belle Isle meet.
- April 6 - May 1—Decathlon test.
- April 27—Baseball season opens.
- April 27—Intramural baseball season opens.
- May 15—Entry blanks for the seventeenth annual Belle Isle meet to be in the office of the Health Education Department.
- May 9—Seventeenth annual decathlon test, Belle Isle.
- June 5—Seventeenth annual Belle Isle meet.
- June 5—Interscholar baseball season closes.
- June 12—Intramural baseball season closes.

GIRLS' ATHLETICS

- Sept. 15—Intramural fieldball tournament starts.
- Nov. 21—Intramural fieldball tournament ends.
- Dec. 1 - Jan. 16—Stunts.
- Dec. 1 - Jan. 16—Intramural games.
- Jan. 17—Skating meet.
- Feb. 9—Intramural fistball and nine-court basketball tournament starts.
- Mar. 27—Intramural fistball and nine-court basketball tournament ends.
- April 6—Begin work on 17th annual Belle Isle meet.
- April 6 - May 1—Pentathlon test.
- April 27—Intramural hit pin or baseball tournament starts.
- May 15—Entry blanks for seventeenth annual field meet to be in the office of Health Education Department.
- May 16—Annual pentathlon test—Codd Field.
- June 12—Intramural hit pin or baseball tournament ends.
- June 5—Seventeenth annual Belle Isle meet.

Precautions against injuries. The physical education program should be administered in such a manner as to reduce to a minimum the possibilities of injuries to pupils. The playgrounds should be free of all holes or projections which might cause pupils to fall, and should be surfaced with turf or with some other suitable covering. A committee of the National Recreation Association has published an excellent report on the surfacing of playground areas.¹ The play space for small children should be restricted for their use only and no hard baseballs, shot, javelins or discuses should be used near this territory. Playground apparatus which is placed on school grounds should be chosen to suit the play program. Usually swings, giant strides, and other pieces of loose apparatus should be avoided. All apparatus should be installed under close supervision so as to make sure that it is correctly and securely built.

Children should be given instruction in the use of apparatus and should be supervised until they have learned to use it safely. All gymnasium and playground apparatus should be inspected every day, and at least once a month a detailed inspection should be made to make certain that no parts or bearings have worn in such a way as to make them likely to break.

Every injury to a child at school should receive attention promptly from the school health authorities or first aid teacher. Four copies of an injury report should be prepared in connection with each case, regardless of how insignificant the hurt appears to be. One copy of this report should be kept on file at the school and one copy should be sent to each of three offices: those of the superintendent, the director of school health, and the director of physical education. A physician should be present at all interscholastic and intercollegiate contests. The following accident report form which is used in the Pittsburgh Public Schools is an illustration of the kind of form which may be used.

In an investigation of safety in secondary school physical education, Lloyd studied the effectiveness of some procedures in leadership and in the organization and classification of students which seem to result in a low incidence of accidents and of days lost from school. He found² that

(a) The leadership procedures which were coincidental with a low incidence were as follows:

1. The use of student leaders in physical education.
2. Where the duties of these student leaders are such that all their time

¹ National Recreation Association, "Surfacing Playground Areas," *Recreation*, XXVI (August, 1932), 229-58; and (September, 1932), 276-307.

² Frank S. Lloyd, *Safety in Physical Education in Secondary Schools*, 115. Educational Series, Vol. IX. New York: National Bureau of Casualty and Surety Underwriters, 1933.

PITTSBURGH
PUBLIC
SCHOOLS

ACCIDENT REPORT

DEPARTMENT OF
HYGIENE
FORM HYG. 97

School _____ Person _____ Age _____ Grade _____ PM _____ Noon _____ After School _____ Evening _____ Person in Charge _____ Date _____ 193 _____

Time _____ AM _____ PM _____ Noon _____ After School _____ Evening _____ Person in Charge _____

Treatment _____ X-Ray Diagnosis _____

Days out of School _____ Signature _____

NATURE OF INJURY		PART	ACTIVITY	EQUIPMENT		PLACE	CONTRIBUTING	
Abrasion	.....	Abdomen	Apparatus	.....	Bar	Bleachers	Carelessness	.....
Bruise	.....	Ankle	Archery	Bat	.....	Corridor	Self	.....
Burn	.....	Arm	Baseball	Bench	.....	Dressing Room	Others	.....
Collapse	.....	Back	Basketball	Board	.....	En Route	Crowding	.....
Concussion	.....	Chest	Ball	Boom	.....	Field	Fatigue	.....
Contusion	.....	Ear	Calisthenics	Buck	.....	Gym	Failure of Equip-	.....
Cut	.....	Elbow	Dancing	C. Sled	.....	Locker Room	ment	.....
Dislocation	.....	Eye	Diving	Dryer	.....	Playroom	Heat	.....
Fracture	.....	Face	Football	Floor	.....	Pool	Illness	.....
Laceration	.....	Finger	Forbidden	Ground	.....	Showers	Inadequate Pro-	.....
Puncture	.....	Foot	Golf	Horse	.....	Stairs	tection	.....
Shock	.....	Forearm	Hockey	Hurdle	.....	Street	No Supervision	.....
Sprain	.....	Hand	Jumping	J and V Stands	.....	.....	Training	.....
.....	.....	Hip	Quoits	Ladder	.....	.....	Officials	.....
Occasion	.....	Jaw	Soccer	Lockers	.....	.....	Facilities:	.....
Class Per.	.....	Knee	Stunts	Mat	.....	Collision	Own	.....
Exhibit	.....	Leg	Swimming	Net	.....	Falling	Opponents	.....
Fr. Play	.....	Mouth	Tennis	Pit	.....	Fooling	Public	.....
Inter S (A)	.....	Neck	Track and Field	Pole	.....	Pushed	Other	.....
Inter S (H)	.....	Nose	Tumbling	Post	.....	Running	.....	.....
Intra (M)	.....	Scalp	Unauthorized	Rings	.....	Slipping	.....	.....
Practice	.....	Shoulder	Volleyball	Rope	.....	Struck	.....	.....
Prelim.	.....	Teeth	.....	Stall	.....	Tripping	.....	.....
.....	.....	Thigh	.....	T. Dummy	.....	Kicked	.....	.....
.....	.....	Wrist	.....	.....	.....	Hit by	.....	.....

is not occupied in entire class or squad responsibility. When they assist in the functions of the class and squad instruction the incidence is lower.

3. Direct instruction in safety for these student leaders shows a lower incidence than no direct instruction in safety.

4. Where the school employs a full-time teacher of physical education. Where the physical education is entirely taught by part-time teachers the incidence is increased.

5. Schools with small enrollments, particularly below 400 students (boys) the percentage of exposures to hazardous activities (as judged by football) is increased.

(b) The procedures of the organization and classification of students which are coincidental with a low incidence are as follows:

1. The use of "grade" as a method of assigning students to physical education.

2. The division of students by age within the physical education classes.

3. The selection of students for interschool athletic teams on the basis of their participation in intramural activities is the best procedure on the basis of days lost incidence.

4. The determination of the student's fitness for inter-school competition by expert opinion of the coach or family doctor is more efficient, by the criteria of days lost, than the parents' written permission or a physical examination. On the criteria of accident incidence the expert opinion of coach or family doctor is the superior procedure when compared with physical examination.

5. Schools requiring a physical examination for physical education show a low incidence of days lost and accidents.

6. A low incidence is found where the examination is given before entering physical education activities and during the school year.

(c) The direct safety measures which are coincidental with a low incidence of days lost are as follows:

1. The availability of a medical doctor when the class and intramural physical education are in progress.

2. The immediate treatment of injuries by the teacher of physical education.

3. Free hospital service.

The table¹ on the opposite page from Lloyd's study classifies the activities by their degree of hazard to participants. It has been suggested that the high incidence of accidents in touch football is due to the fact that the rules of this game are not well standardized and adequate equipment and supervision is lacking in most cases.

Consent of parents for participation in competitive sports. Before boys or girls are permitted to participate in competitive sports

¹ *Ibid.*, p. 49.

TABLE IV
CLASSIFYING ACTIVITIES BY DEGREES OF HAZARDS

Accident Incidence per 1000		Description	Days Lost Incidence per 1000	
Activity	Inc.		Inc.	Activity
Touch Football	17.11	<i>Very Hazardous</i>	88.01	Heavy apparatus
Heavy apparatus	13.68		81.52	Touch football
Football	8.75		72.44	Wrestling
			64.81	Football
Lacrosse	5.97	<i>Highly Hazardous</i>	23.58	Tumbling
Wrestling	5.71		14.04	Speed ball
Tumbling	5.15			
Hockey (Ice)	3.55	<i>Hazardous</i>	7.65	Field (Track)
Archery	3.53		7.34	Cross country
Basketball	2.69		6.21	Basketball
Speed ball	2.44		5.97	Lacrosse
Hockey (Field)	2.37		4.92	Soccer
Fencing	2.05		4.88	Hockey (Ice)
			4.33	Hockey (Field)
			2.34	Baseball
Baseball	1.00	<i>Mildly Hazardous</i>	.93	Track
Field (Track)	.99		.73	Handball
Soccer	.98		.71	Swimming
Cross Country	.82		.67	Indoor ball
Swimming	.68		.51	Fencing
			.42	Volleyball
Handball	.35	<i>Minimum Hazard</i>	.16	Boxing
Track	.32		.05	Tennis
Golf	.26		.02	Calisthenics
Indoor ball	.23		.0	Dancing
Boxing	.19		.0	Archery
Dancing	.16		.0	Golf
Volleyball	.14			
Tennis	.10			
Calisthenics	.09			

each one should be required to bring a written statement from his parents or guardian giving their consent for such participation. This is absolutely essential in connection with all forms of interscholastic competition and is desirable for intramural competition. The following form which is used in the Atlantic City public schools is suggestive of the form which might be used.

ATLANTIC CITY PUBLIC SCHOOLS

DEPARTMENT OF HEALTH EDUCATION

..... School

To the Parent or Guardian:

In order that your son, daughter, ward may participate in any school athletic activities other than those carried on as part of the regular physical training class programs, it will be necessary for you to give your written consent.

You are requested to cross out the activities in which you *do not* wish your boy or girl to take part.

Boys—Football, Baseball, Track, Basketball, Soccer, Swimming, Tennis,
Long Ball, Dodge Ball, Jumping Circle.

Girls—Baseball, Track, Basketball, Swimming, Tennis, Field Hockey,
Catch Ball, End Ball, Blue and White, Folk Dancing.

It is understood that time after school will be required for practice and competition. In case the competition is held outside of Atlantic City, you will be furnished with a separate blank giving full details of the trip.

Date (Signed)
Parent

It should not be assumed that the written consent of a parent or guardian gives any reliable assurance that a pupil is physically or emotionally fit to take part in vigorous sports. Only an accurate medical examination can suffice for this.

Health examination as a prerequisite for athletic competition.
In addition to the written consent of parents there should also be required a special health examination of all pupils who wish to take part in the more strenuous and highly organized type of athletic competition. A requirement of this kind serves as a safeguard to the pupils and also protects the teacher from severe adverse criticism which would probably result if some organically unsound pupil were to suffer seriously from participation in competitive athletics. The health examination of the members of this group may be made by the family physicians of the children or by the school physician. It should be required of all boys and girls who wish to participate in interscholastic or intramural athletics. The reports of the medical examinations and the written consent of the parents or guardians should be filed accurately. No exceptions should be made to either

CLASSIFICATION OF PUPILS AND ORGANIZATION 259

of these requirements. The following form is used in the Ann Arbor Public Schools. It is printed on a 3 x 5 inch card which can be conveniently filed.

Date, 19....

ANN ARBOR PUBLIC SCHOOLS

DEPARTMENT OF SCHOOL HEALTH

PERMISSION FOR HIGH SCHOOL INTRA-MURAL ATHLETICS

..... has undergone the Health Examination and been found to be in such physical condition as will permit him her to take part in (sport)
CROSS OUT ONE
without any physical hazards.

Remarks:

.....
.....
.....
.....

School Physician.

Form A-111—D-O

Summary. The purposes of the classification for pupils for physical education have been stated as safety, equalization of ability, and universal participation. The method used for the classification of pupils for physical activities should provide first of all for a medical examination. The pupils who are found to be physically fit should then be classified into groups of approximately equal ability for purposes of participation. There have been a number of plans used for the classification of boys and girls, each of which has been found to be useful in different situations. Most of these methods have been based on weight, height, age, grade, or a combination of two or more of these factors.

The method devised by Reilly, which uses a system of exponents and takes into consideration the grade, age, height, and weight of children, has been modified in a number of cities and has been found to be of much practical value. Some of the revisions which have been prepared use only age, height, and weight. It seems that grade is not an important factor in classification. The classification chart included in the California State Course of Study in physical education for elementary schools has been found to work well in the classification of pupils for participation in physical activities. McCloy has proposed three scientifically devised indices for the classification

of boys for participation in track and field athletics. It seems that McCloy's Classification Index I is the most practicable and satisfactory method now available for classifying normal boys for participation in physical activities.

In order to provide successfully for the mass participation of pupils it is essential that they be classified into homogeneous groups on the basis of ability. It is also necessary to modify the traditional methods of conducting athletics. Running may be most easily conducted on a mass basis in the form of relays. Other methods of conducting dashes include allowing points for the winners of each heat, and the zone method. The jumps and throws may be conducted on a mass basis by a shuttle method, zone method, elimination method, or accumulative method.

Tournaments provide the means for the organization of a series of games in such a way as to include a large number of pupils. The Round Robin, the elimination, the eliminating-consolation, and the ladder or perpetual tournaments are the ones used most often. The Dickinson system has been found to be useful in choosing champion football teams from among the college teams of the country.

A sports calendar is an important device in the administration of a physical education program for boys and girls. Every reasonable precaution should be taken to prevent injuries to pupils while they are participating in physical education activities. Children who are unavoidably injured should receive promptly expert attention. The written consent of a child's parents should be on file at the school before he is permitted to participate in competitive sports. It is also essential that the report of a medical examination of each competitor be on file.

QUESTIONS

1. What are the purposes of classifying pupils for participation in physical education activities?
2. How does the Reilly method classify pupils?
3. Explain the classification system for boys and girls which is given in the California State Course of Study in physical education for elementary schools?
4. What were some significant conclusions that McCloy reached in his studies on the relative contributions that chronological age, physiological age, school grade, height, and weight make to the prediction of performance ability of boys in track and field athletics?
5. What are the three classification indices proposed by McCloy?
6. Under what conditions may each of these indices be used satisfactorily?
7. Describe some methods that may be used for conducting mass participation in running.

8. Describe some methods that may be used for conducting the jumps and throws on a mass basis.
9. Describe the organization of the four types of tournaments which are most often used.
10. What procedures in leadership, organization, and classification did Lloyd find to result in a low incidence of accidents and of days lost from school?

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CHAPTER XV

PRINCIPLES OF ATHLETICS

The importance of athletics in physical education. In the United States athletics make a more widespread appeal than any other part of the physical education program. The interest which is taken by nearly all boys and girls in track and field events, in organized team games, in water sports, and in recreational sports such as tennis, hand-ball and golf cause these activities to offer unusual educational opportunities. Every program of physical education should provide for the participation of all boys and girls at all school levels in athletic activities suited to their interests and abilities.

One should not think of athletics exclusively in terms of highly organized competitive events, or as competition between representative teams from different schools. There are athletic events which are suitable for little children in the first grade; other sports appeal to boys and girls at different ages. Many of these activities are not predominantly competitive, although most of them lend themselves to competition either against one's own record or against an opponent.

The content of the athletic program. The school program of physical education should include a broad range of athletic activities. The following standards are suggested as guides in formulating a program of athletics.

1. A program of athletics should provide for a choice of activities and be so organized as to make provision for the individual differences of pupils. There are some individuals who naturally have the ability to learn easily activities which require speed and quickness. There are others who have more strength and endurance and, therefore, can be more successful in events which require these characteristics. Individuals also differ in their modes of emotional expression. Some like to take part in games which involve considerable roughness and bodily contact, while others prefer activities which place a premium on agility and alertness. The program of athletics, therefore, should include a variety of activities so as to provide participation for boys and girls of different ages, sizes, types, abilities and interests.

2. The athletic program should provide for the participation of all pupils. All pupils should have an opportunity to participate in athletic activities each year. Enough teams should be organized in every

game so that every normal pupil may be a member of a team. In order that this plan may be a success it will be necessary for the pupils to be classified into homogeneous groups on the basis of ability. Several teams must be organized in each group so that participation may be carried on among the pupils of approximately equal ability.

3. Games that can be played out of school as well as at school should be included in the athletic program. Beginning in the lower grades of the elementary school, activities should be taught that can be used by the pupils during their play time, when they are not in school. One justifiable criticism that has been made of physical education is that children during their leisure time seldom play the games which are taught in the physical education periods. In the upper grades, games which can be played out of school hours, like tennis, golf, handball and squash, should be taught. Highly organized competitive games such as hockey, basketball and football that are usually emphasized in high school are not played often as recreations during leisure time.

4. Games that are traditionally seasonal should be played during the appropriate seasons. There are so many good games that boys and girls can play during each season of the year that it seems inappropriate and unwise to encourage the playing of games out of their traditional seasons. Small schools with scanty programs of athletics sometimes begin playing basketball in the fall when school opens and continue playing it throughout most of the school year. Such procedures greatly restrict the range of play activities which the pupils learn, and place undue emphasis on the playing of one game. This criticism can be made fairly of the custom in some colleges and high schools of playing football in the spring.

5. In the first three grades, ages about 6, 7, and 8, the athletic program should consist of a few of the simpler athletic skills such as bouncing a soft rubber ball, catching a ball, and kicking a round inflated ball. Elementary skills such as these have been organized into a "Star Test," which is described earlier in this book. It is unwise to attempt to teach small children highly organized team games or to develop a great deal of technical skill in athletic events. Boys and girls of these ages do not like much organization and object to spending much time on drill in fundamental skills.

6. In grades four through six, ages about 9, 10, and 11, emphasis should be given to the practice of the skills and techniques of athletic games. Norms or standards of achievement should be developed in order that each individual may check his achievement in each skill against the standard. Competition between individuals or between teams should not be stimulated. Boys and girls of these ages are

usually individualistic in their tendencies. Highly organized games, therefore, do not make the greatest appeal to them.

7. In the junior high school grades, ages about 12 to 15, instruction in fundamental skills should be continued and provision should be made for competitive activities. The games used in the competition should be suited to the abilities and interests of boys and girls of these ages. Playground baseball, hard baseball for boys, speedball, field ball, and basketball on a small court with short periods are suitable games. The varsity team plan of organization is not suitable for junior high schools.

8. In senior high schools provision should be made for participation by some pupils in the more highly organized competitive games. These should include American football for boys and field hockey and basketball for girls. Vigorous group participation is believed to appeal especially to boys and girls of senior high school age and to make an important contribution to the development of the organic systems of the body. During these years, activities should also be emphasized which will contribute to the preparation of the pupils for the successful use of leisure time during their years in school and also after they finish their school careers. These include swimming, golf, tennis, and handball.

The need for inter-institutional athletics. The interest and popularity which has been accorded to interscholastic and intercollegiate athletics indicate that games of this nature make a fundamental appeal to a large number of people. It is probably a combination of many things which makes athletic games so popular, but regardless of the specific bases of appeal, it seems evident that competitive athletics are meeting a real need in American schools and communities. It seems wise, therefore, that high school and college programs of physical education should provide for interinstitutional athletics. It should not be assumed that these events should be conducted on the same basis and in the same manner as have been customary in most American situations.

Conditioning factors in athletics. Rogers¹ has shown that a number of factors have been influential in the development of athletic programs and organizations in this country. He has pointed out that many of these factors are of great importance and significance in connection with any effort to change current practices or to direct the development of athletic programs. Some of the factors are: (1) the example of the older Eastern universities; (2) the public interest and newspaper publicity given to athletics; (3) the vast amount of

¹ Frederick Rand Rogers, *The Future of Interscholastic Athletics*, pp. 8-21. New York: Teachers College, Columbia University, 1929.

money involved in the manufacture of sporting goods, payment of coaches and trainers, salaries of graduate managers and state association secretaries, and investments in stadiums and other facilities; and (4) the influence of newer educational theories and objectives.

It seems important for persons interested in the educational aspects of athletics to recognize the interests which influence the development of athletics. The forces of education must teach to the children in the schools new and higher ideals in regard to athletics in order to combat successfully the attacks of vested interests. Steadfastness and loyalty to ideals must be emphasized. This method offers some hope for the solution of the problems of interscholastic athletics through the development of an intelligent understanding and evaluation by a new generation of students and alumni.

The objectives of inter-institutional athletics. In all phases of education including athletics, it is necessary to have a clear understanding of objectives in order to choose intelligently the activities to be taught and the methods to be used in teaching. The general aim of athletics should be the same as that of all physical education and of all education. The objectives of athletics should serve as guideposts along the way to direct teachers on the best road to the achievement of the general aim. Definitely stated objectives help teachers and pupils to check and evaluate the progress that is being made.

The objectives of athletics are frequently discussed under the headings of educational objectives and administrative objectives. The following statement of objectives organized in this way has been prepared by a Committee of the Society of Directors of Physical Education in Colleges: ²

Educational Objectives: (1) Team play; (2) clean living; (3) discipline and hard work; (4) loyalty; (5) confidence and self-control; (6) respect for rules of the game; (7) service and self-sacrifice (self-denial); (8) stamina and courage; (9) quick thinking under fire; (10) finding one's self, realizing limitations and possibilities, retaining hope and overcoming fear; (11) respect for honored rivals; (12) an interest in physical development; (13) a spirit of friendly rivalry between student bodies; (14) learning the lesson of humility.

Administrative Objectives: (1) Coaches to be members of the faculty, with a seat therein, assigned usually to physical education, on a full-year basis; (2) control of athletics to be vested in president, faculty, alumni, and students, with the latter two in minority; (3) intercollegiate athletics to be run by a budget plan, funds controlled by the appropriate college officials; (4) allow no intercollegiate freshman games; (5) publication by the president of the

² Williams, Jesse Feiring (Chairman), "The Objectives of Inter-Collegiate Sport," *Society of Directors of Physical Education in Colleges, Proceedings, 1926*, pp. 37-44.

college in his annual report of the number and kind of scholarships given to students; (6) allow varsity participation in the major sports—football, baseball, basketball, track, and cross-country—for two years only (junior and senior years).

Proposed objectives for intercollegiate athletics: The different statements of objectives which have been proposed for intercollegiate athletics have been, no doubt, the objectives that were wholeheartedly accepted by the committees and individuals who formulated them. Practically, however, it seems apparent that other objectives have shaped the policies and programs of intercollegiate athletics. Some of these objectives which have really functioned have been evolved and formulated by coaches and directors of athletics, others by newspaper writers, alumni groups, undergraduate student bodies, college faculties and college administrative officers. Most of the so-called evils that some persons attribute to intercollegiate athletics are not evil or wrong within themselves. For example, there is nothing more inherently wrong in paying a young man to play ball than to pay him to sing, dance, play the piano, or perform in any other way. The wrong part of certain practices that are said to exist in connection with athletics is doing these things in violation of agreements with other schools and in violation of the announced principles and objectives of the program. Any institution which is supported by society for the education of boys and girls is certainly false to its obligations if it fails to live up to its highest ideals in all its programs and practices.

It is essential, therefore, that institutions which conduct programs of intercollegiate athletics definitely state the real objectives of the programs. It is wrong to state to the students and others that certain things are the outcomes sought and then proceed to organize, administer, and carry on the program in such a way that it is plainly evident that other objectives are determining the methods of procedure. The following statements of the objectives of intercollegiate athletics apparently include the ideas of many persons in positions of responsibility and authority to influence the methods of conducting athletics. These objectives can be justified without attempting to phrase them in academic terms.

The objectives of intercollegiate athletics are:

1. To provide an objective, vital and interesting point of contact between the college and a large number of former students.
2. To provide an objective symbol around which the loyalty, morale, and college spirit of undergraduates may be organized.

3. To provide a wholesome means of entertainment and recreation for the student body and the faculty.

4. To provide a source of newspaper publicity for the college.

5. To earn money to pay for the program of intercollegiate athletics and, if practicable, to earn a surplus to be used in paying for a broader program of athletics for the entire student body.

6. To provide an intensive type of physical education for the relatively small number of students who are members of the varsity teams.

An athletic platform for girls. The purposes of the Women's Division of the National Amateur Athletic Federation are to stimulate a wider participation by girls and women in athletics and to develop standards for conducting a program of athletics suited to the needs and interests of girls and women. In keeping with these purposes, this organization has proposed the following platform which has been very influential in shaping athletic policies and programs. These statements may well serve as a guide to persons and to groups who are concerned with athletics for girls.

PLATFORM

THE WOMEN'S DIVISION, NATIONAL AMATEUR ATHLETIC FEDERATION OF AMERICA,

aims to:

1. Promote such programs of athletic activities for all girls and women as shall meet their needs, and as shall stimulate interest in activities that are suited to all ages and capacities.

2. Promote competition that stresses enjoyment of sports and the development of good sportsmanship and character rather than those types that emphasize the making and breaking of records and the winning of championships for the enjoyment of spectators or for the athletic reputation or commercial advantage of institutions and organizations.

3. Promote interest in awards for athletic accomplishment that have little or no intrinsic value.

4. Promote educational publicity that places the emphasis upon sport and its values rather than upon the competitors.

5. Promote the use of suitable costumes for athletic activities.

6. Promote the provision of sanitary and adequate environment and facilities for athletic activities.

7. Promote the apportionment of adequate time allotment for a physical education program such as shall meet the needs of the various age groups for growth, development and the maintenance of physical fitness.

8. Promote the training and employment of women administrators, leaders and officials who are qualified to assume full responsibility for the physical education and recreation of girls and women.

9. Protect the health of girls and women through the promotion of medical examinations and medical "follow-up" as a basis for participation in athletic competition, and of a system of supervision that shall assure a reasonable and sane attitude toward participation in activities at times of temporary physical unfitness.

10. Protect athletic activities for girls and women from the dangers attendant upon competition that involves travel, and from their commercialization by interest in gate receipts.

11. Promote the general adoption of approved rules for the conduct of athletics and games for girls and women.

12. Promote the study of the existing rules of all sports to the end that they may be changed to meet the specific needs of girls.

Principles of athletics. A statement of some of the fundamental principles of athletics should prove of value in using athletics as a means to achieve the aims of education and of physical education. The North Central Association of Colleges and Secondary Schools has proposed the following principles and policies for governing the administration of athletics in secondary schools.¹

1. All athletic competition in high schools should grow out of and form an integral part of the physical education program.

2. Individual athletes should *not be exploited* for the glory of the town, the school or the coach.

3. A well-balanced program of athletics should provide opportunities for participation in sports which may carry over into later life.

4. Greater emphasis should be placed upon extending opportunities for participation in sports and games to *all pupils* rather than upon the intensive coaching of a few.

5. The administration of all athletic contests in the high school program should be *entirely controlled by properly constituted* school officials.

6. The promotion of pupil initiative and self-confidence among athletes is favored by transferring the responsibility for managing and directing the team *during contests from coach to student manager or captain.*

7. Fair play, courtesy, generosity, self-control and friendly feelings for the opposing school should not be sacrificed in the desire to win.

8. Sportsmanship ideals apply equally to player and spectator, to winners and losers.

9. The school should aim to develop sufficient skill in one or more sports among all its pupils to create abiding interest.

10. A liberal program of intramural competition in sports and games should be provided in schools sponsoring interscholastic teams.

11. The daily coaching practice should not be so long or so strenuous as to endanger the health of contestants or to detract unduly from evening study.

¹ Morley, E. E., "Report of the Committee on Athletics in Secondary Schools," *North Central Association Quarterly*, VI (June, 1931), 26-27.

12. No greater proportion of school time should be devoted to promoting student support of athletics than is given to promoting dramatics, concerts, debates or other non-athletic activities.

13. Schedules of games should be so arranged by each school as to limit the number of its contests to one game per week during a playing season (in given sport).

14. Contests played at night should be scheduled on Friday or Saturday.

15. No pupil should be permitted to take part in a contest in any sport without first receiving a thorough physical examination from a competent physician.

It is believed by the writer that these principles and policies are sound and can be used advantageously in guiding an athletic program. There are some points of view, however, which are peculiar to athletics for girls. The following statements are suggested, therefore, as additions to this proposed list of principles.

1. Competition for girls should be carried on within the school. Interscholastic competition for girls should not be stimulated. Participation of girls in state, sectional, national, and international contests should be discouraged.

2. In cases where girls from different schools come together for participation in athletics every care should be taken to guarantee that the spirit of the occasion is one of friendliness and playfulness. The spirit of intense rivalry that is traditional in competition for boys should be avoided. The play of girls should not be commercialized by charging admission fees nor exploited for publicity or other purposes.

3. All athletics for girls should be in charge of a woman teacher of physical education who is qualified to care for the educational, social, and hygienic needs of the girls. Such a woman teacher should have a minimum preparation of 4 years of college work with physical education as the major field of study.

Interscholastic relations. School administrators and other persons engaged in the various fields of education have been giving an increasing amount of thought and attention to the problems of interscholastic athletics within the last few years. A large number of educational organizations have passed resolutions, promulgated policies, suggested platforms, and advocated statements of principles for the guidance of athletic programs.

A statement of athletic policies by a committee of the California Association of City Superintendents is indicative of how the better informed and more professionally-minded school administrators are thinking in regard to interscholastic athletics. The following policies were recommended by this committee in 1931:

1. All interscholastic championship games, in so far as possible, should be limited to local leagues.
2. There should be a revision of the organization of local leagues, considering the size of schools, and limiting the number of schools in the league so as to reduce the number of games.
3. With a few exceptions long distance travel by athletic teams, involving staying overnight, should be eliminated.
4. American football should not be played in grades below the tenth.
5. The discus and javelin throws as athletic activities in the high schools of the state should be abandoned.
6. Spring and summer football practice by all schools should be eliminated.
7. The use of the terms "major" and "minor" sports should be eliminated and the proper emphasis placed on all sports according to their educational values to those who participate.
8. More emphasis should be placed upon the sports that follow through into after school years, such as volley-ball, handball, golf, tennis, and swimming.
9. Athletic awards of intrinsic value should be eliminated and school letters should be substituted for all students who meet the minimum requirements in mental, social, and physical efficiency.
10. The reduction to an absolute minimum of ticket selling within the school for athletic contests should be effected.
11. Emphasis on interscholastic athletics should be decreased and emphasis on intramural athletics increased.
12. Students should be required to pass a physical examination by a licensed physician before they are permitted to participate in athletic competition.
13. The use of unpaid adult and student officials in all games, with the exception of league games in football, basket-ball, and baseball should prevail. For these games adult officials should be appointed by the school authorities and the officiating done in so far as possible by school people. The compensation for officials should be standardized by the local leagues.
14. The superintendents and city and county supervisors of physical education should have a definite responsibility, together with the high school principals, in determining interscholastic relationships.
15. The high school principals of the state, in coöperation with the superintendents and city and county supervisors of physical education, should use the foundation laid by the California Interscholastic Federation in developing a larger group of local leagues and in increasing the personnel of the governing body.
16. The Chief of the Division of Health and Physical Education in California should be a member of the governing body which determines all interscholastic relationships.

Trends in athletics. The Carnegie Foundation for the Advancement of Teaching published in 1929 a report¹ on American College

¹ Howard J. Savage and others, *American College Athletics*. Bulletin No. 28. New York: The Carnegie Foundation for the Advancement of Teaching, 1929.

Athletics. This study included the literature of American school and college athletics; administrative practices used in connection with college athletics; the results of athletic participation; the hygiene of athletic training; the status of the college coach of athletics; the extra-mural relationships of colleges in connection with athletics; the recruiting and subsidizing of athletes; the press and college athletics; and the values in American college athletics.

This is the most complete and accurate study that has ever been published in connection with athletics and seems to have had a good effect on athletic programs and policies in American schools and colleges. One frequently hears individuals state that the Carnegie reports on athletics are not accurate and authentic. It seems, however, that most unbiased persons, who have studied these publications, agree that the conclusions reached are based on adequate data. The writer has been unable to find any published material which points out definitely any unfounded or inaccurate statements in these reports.

From a survey of the literature of American school and college athletics, this study concludes that the following tendencies in athletics are indicated: ¹

1. There is general acceptance of athletics as education. Once opposed, then tolerated, athletics have come to be regarded as an important part of the educational process at practically all levels, but especially for youth.

2. Existing opposition to athletics is directed for the most part not at athletics per se, but at what are regarded as evils resulting from an exaggerated and commercialized athletic system, especially in intercollegiate football.

3. Managed at first by undergraduates, athletics are found under various types of control—alumni, faculty, student, and combinations of these; it is now recognized that more and more the educational institution—school or college—must exert itself to administer athletics educationally, with adequate student responsibility but freedom from outside non-educational control.

4. The claim that athletics seriously interfere with scholarship apparently remains unproved although there is some recent evidence that athletes do not reach fully the levels of intellectual attainment their inherent ability would make possible.

5. As to health, college athletes are found to have better life-expectancy than the general population, but no better than the college population, which is itself a selected group, and not so good as that of college men of high scholarship rank.

6. "More athletics rather than less athletics" is generally accepted as one of the remedies for athletic ills—that is, an opportunity for all youth to participate in athletics through intramural and similar activities provided as a regular part of the educational program.

¹ W. Carson Ryan, Jr., *The Literature of American School and College Athletics*, Bulletin No. 24. New York: The Carnegie Foundation for the Advancement of Teaching, 1929.

7. Coaches and athletic directors are regarded as highly important teachers of youth, whose personal and professional qualifications must be of the best, and who must understand how to teach, not dominate.

8. School athletics are held to be even more specifically educational than athletics at the college level, and school authorities, public and private, are working on programs of play activities for all that will include games and sports suited to the physical, social, and emotional needs of children at various ages and stages of development.

9. Considerable difference of opinion prevails as to the desirability of inter-institutional athletic contests for girls and women, with a strong trend at present against such contests, notwithstanding the insistence of a small group that girls and women are as capable of athletic competition as boys and men and need it more.

10. The ideal of sportsmanship is held aloft as one of the genuine values of school and college athletics, of even world-wide significance; at the same time there is controversy over the traditional distinction between professionalism and amateurism.

Current developments in sports. In 1931, two years after their first reports on American College Athletics, the Carnegie Foundation for the Advancement of Teaching published another report on athletics. Its purpose was to set forth and evaluate some of the significant changes that had occurred since 1929 in the relationship of sport to the educational processes.¹

Some of the conclusions reached in this later study may be summarized as follows:

1. There is developing an appreciation of the obvious fact that the president of a college is primarily responsible for the way in which athletics are conducted in his college, and that in addition to the president the responsibility also rests on the faculty and the officers of the athletic department.

2. A number of institutions are definitely and clearly making an effort to eliminate abuses which have grown up in connection with the commercial aspects of American college sports.

3. The line of demarcation is sharpening year by year between institutions which try to conduct their athletics on an educational basis and the ones which do not exhibit good ideals in the administration of athletics.

4. It is coming to be more clearly recognized that the under-graduates in a college are the persons who should be given first consideration in connection with the administration of athletics and not the alumni, the townsmen, the sports writers, the coach or the faculty members.

5. Programs of intramural athletics are continuing to expand in a greater number of colleges.

6. The enthusiasm of undergraduates for intercollegiate athletics is declin-

¹ Howard J. Savage and others, *Current Developments in American College Sports*, Bulletin No. 26. New York: The Carnegie Foundation for the Advancement of Teaching, 1931.

ing. Along with this there is a changing attitude of the undergraduate toward the academic and athletic phase of college life.

7. "There has been a notable advance in the attack upon recruiting and subsidizing in American college athletics." It is being more definitely recognized that unethical practices reflect unfavorably upon the institutions which tolerate them and upon the administrative officers of these colleges. Undergraduates in at least one eastern university are reported to be taking the attitude toward subsidizing which is expressed by the catch phrase, "Let the hired players play." More persons are appreciating the fact, stated by a sports writer in the *New York Times*, August 22, 1930, that, "If there are subsidized football players at any college the president of that institution either knows about it or he is neglecting his duties."

Summary. Athletics seem to make the most widespread appeal of any part of the physical education program. Every comprehensive program of physical education, therefore, should provide an opportunity for all boys and girls to participate in athletic activities. In order that the content of the athletic program may be wisely and intelligently chosen, it is desirable to have some definitely stated criteria by which to guide one's selection.

The interest and popularity which have been accorded to intercollegiate and interscholastic athletics indicate that there is a need for interinstitutional athletics. There are certain factors which influence the development of athletics and which must be recognized. These include such things as the example of the older eastern universities, the public interest in athletics, the great amount of money involved, and the influence of educational theories.

The objectives of athletics may be grouped as educational objectives and administrative objectives. There apparently is a need for an acceptance of more honestly stated objectives of intercollegiate athletics. This is desirable in order that the actual policies and practices which are in force may conform more closely to the announced objectives.

The Platform of the Women's Division of the National Amateur Athletic Federation may be advantageously used as a statement of guiding principles for athletics of girls and women. The Report, in 1931, of the Committee on Athletics in Secondary Schools of the North Central Association of Colleges and Secondary Schools states well some principles of athletics for boys. The Carnegie Foundation for the Advancement of Teaching published in 1929 and in 1931, reports on American College Athletics. These reports pointed out the tendencies and trends in athletics.

QUESTIONS

1. What criteria should be used for the selection of the content of the school athletic program?
2. To what extent is there indicated a need for interinstitutional athletics?
3. What are the conditioning factors which have influenced the development of athletic programs?
4. What are the objectives of athletics as stated by the committee of the Society of Directors of Physical Education in Colleges?
5. What objectives might justifiably be proposed for intercollegiate athletics?
6. What statements of principles have been proposed by the Women's Division of the National Amateur Athletic Federation for the guidance of athletics for girls and women?
7. What guiding principles for athletics have been proposed by the North Central Association of Colleges and Secondary Schools?
8. What additional principles might be added to the list of the North Central Association which would apply particularly to athletics for girls?
9. What trends in athletics were reported by the Carnegie Foundation in 1929?
10. What were the current developments in athletics in 1931 as reported by the Carnegie Foundation?

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CHAPTER XVI

THE ADMINISTRATION OF ATHLETICS

The responsibility for the administration of athletics. It was pointed out in the preceding chapter that there is increasing an appreciation of the fact that public school and college administrative officers have the primary responsibility for the proper administration of athletics. It seems, in fact, that this principle is almost universally accepted by administrators of secondary schools. It is agreed by leaders in the administration of colleges, secondary schools, and physical education, that the control of athletics in public schools must be vested in the superintendent of schools and the board of education; and in colleges, in the president and board of trustees. Alumni boards and booster clubs cannot be depended on to make constructive contributions to the solution of educational problems.

In order that educational authorities may execute efficiently their responsibilities in connection with the administration of athletics, the administrative practices indicated in the following paragraphs should be observed.

1. There should be one centralized department of physical education for men and women with a qualified director at its head. All phases of physical education and athletics should be administered through this department. This should hold true in both high schools and colleges. If this type of administrative organization is to function successfully with the minimum of friction it will be necessary for qualified persons to agree on definite and clearly stated objectives for intercollegiate athletics and physical education. Unless an amicable agreement can be reached on objectives, it is doubtful if an unified department can be made to function smoothly.¹

2. The members of the physical education staff should be selected in terms of the same general standards as other members of the faculty and should be employed by the regular school authorities in the same way that other staff members are employed. There is no justification for permitting "alumni boards" and "boards of strategy" to employ and discharge faculty members.

3. The professional preparation of the director of the department

¹ B. L. Stradley (Chairman), "Report of the Committee on Physical Education and Athletics," *North Central Association Quarterly*, VIII (June, 1933), 52-53.

and the members of the staff should compare favorably with that of the faculty members of other departments in the college or high school. All coaches and other members of the physical education staff should be members of the faculty and should be expected to attend faculty meetings, accept committee assignments and assume responsibilities equal to other members of the faculty.

4. An advisory athletic committee is frequently desirable in colleges and sometimes in high schools. Such a committee should be composed largely of faculty members but may have representatives from the student body and alumni. The responsibilities of this committee should be advisory in nature. A committee of this kind is believed to be desirable because of the widespread interest of students and alumni in athletics, and because the extramural athletic relationships frequently involve institutional policies. Deciding on such policies should not be the exclusive responsibility of one man or of one department.

5. All funds used in connection with athletics should be handled on a budget plan under the direction of the college treasurer, business manager, or other school official who is responsible for the administration of other school funds. Athletic budgets should be approved by boards of trustees, or boards of regents, in the same way as other budgets are approved.

6. Publicity for athletics in either a college or a high school should be under the direction of the person who handles all the publicity for the institution.

7. All purchases by the athletic department should be made by means of requisitions through the business office of the school or college.

The organization of athletics. In order that desirable educational outcomes may be secured from athletics, it is essential that sound administrative policies and objectives be accepted. Some of the policies and objectives in organization which are conducive to desirable educational outcomes are:

1. Athletics should be recognized as an integral part of physical education and should contribute to the achievement of the educational objectives of physical education.

2. Athletics should be organized into an unified administrative unit with other parts of physical education. In a university this administrative unit might be a School of Physical Education such as is in existence at the University of Oregon, Boston University, University of Pennsylvania, Pennsylvania State College and the University of Illinois. Or it might be a Division, which is a service unit, such as that at the University of Iowa. In smaller colleges and high

schools there should be organized a Department of Physical and Health Education or a Department of Physical Education which should coöperate closely with the Department of Health Education.

3. Athletics should be organized and conducted under professional adult leadership and direction. In the opinion of some persons, educational institutions should adopt a policy of *laissez faire* in regard to athletics. They believe that students should organize, finance, schedule, and administer their own sports. This was the policy followed in America for a great many years and has resulted in most of the objectionable practices which have become associated with athletics. It has been found that if desirable outcomes are achieved from athletics there must be available a high type of professionally prepared adult leadership.

4. Athletics should be organized in such a way as to provide for participation of most of the students in school. Some of the methods which have been tried in an effort to secure universal participation include the great expansion of programs of intramural athletics, the organization of "B" teams and junior varsities in colleges, the limitation of varsity participation to juniors and seniors, interschool competition for the champions of intramural leagues, and the development of play days for girls and women. It has been pointed out previously that the most fundamental and effective procedure which can be used to secure universal participation in athletics is (1) to classify the students according to ability into homogeneous groups, and then (2) to arrange competition between teams made up of players of approximately equal ability.

Problems in the administration of athletics. In connection with the management of inter-institutional athletics in both high schools and colleges, there are usually a number of administrative details involving problems which must be successfully solved in order to insure the best type of educational results. These problems include such items as the eligibility of athletes, the transportation of teams, the conduct of pupils on trips, the interference of athletic contests with the regular school work, the behavior of pupils and other spectators during and after games, the successful interpretation to the public of the place of athletics in the school program, organizing and conducting athletics so as to include the maximum number of participants, and planning so as to reduce the injuries to players to the lowest possible minimum.

The report on athletics which was made by the National Survey of Secondary Education¹ includes a study of the administrative prob-

¹ P. Roy Brammell, *Intramural and Interscholastic Athletics*. Bulletin, 1932, No. 17. National Survey of Secondary Education, Monograph No. 27. Washington: Government Printing Office. 1933.

lems in athletics in 327 secondary schools. Twenty-eight of these problems are shown in the table on pages 279, 280. In the second column of this table is shown the number of schools in which each problem has been, but is no longer, troublesome. In the third column is given the number of schools in which each problem is at present troublesome, and in the fourth column is indicated the number of schools in which each problem has never been troublesome under the present administrative régime. The most satisfactory way to read this table, probably, is to compare the frequency of occurrence of each problem in each vertical column. For instance, in column 3 the problem which is at present troublesome in the greatest number of schools is "Too few pupils derive benefit." "The tendency of the community to rate the success of the school in terms of athletic success" and "the conduct of spectators during contests" are at present troublesome in 101 and in 89 schools, respectively.

Persons concerned with the administration of athletics should set up their objectives and direct their programs in such a way that the numbers in the third column, which indicate the number of schools in which problems are at present troublesome, may be decreased; and the numbers in the second column may be increased, thereby indicating that more of the troublesome administrative problems have been solved.

Financing athletics. Interscholastic and intercollegiate athletics are, in most places, expected to be self-supporting. Ticket sales and student fees are the two most common sources of funds in both high schools and colleges. In some institutions the cost of conducting athletics is paid from the general budget in the same way as all other expenses are paid. The dependence for support which is placed on gate receipts in a large number of institutions puts undue emphasis on the development of winning teams. A team which wins most of its games attracts larger crowds, as a usual thing, than a losing team. The natural desire to win, when motivated and stimulated by a financial motive, sometimes causes schools to attach an importance to winning games out of all proportion to their real educational significance.

If athletics are accepted as part of the school program on the basis of being primarily educational, the cost should be borne out of general school funds in the same way that all other educational enterprises are supported. There is no objection, particularly, to accepting an admission fee and applying it to the support of athletics, but they should not be expected to earn large sums of money and at the same time be conducted from an educational point of view. The writer realizes that there is no immediate prospect of inter-

TABLE V¹

THE STATUS OF CERTAIN PROBLEMS PERTAINING TO INTERSCHOLASTIC ATHLETICS
IN 327 SECONDARY SCHOOLS

Problem	Has been but is no longer trouble- some	Is at present trouble- some	Has never (under present régime) been trouble- some
1. Arrangements for athletic contests placed too much upon a commercial basis.....	12	33	147
2. Tendency of the community to interfere in the administration of interscholastic athletics	35	43	142
3. Tendency of the community to rate the success of the school in terms of athletic success	24	101	115
4. Relation of the administration to the coach	15	24	146
5. Salary of coach as compared to that of other staff members	11	36	137
6. Detraction from school work.....	33	78	117
7. Encroachment upon school time.....	33	61	121
8. Eligibility of participants	59	82	106
9. Too few pupils derive benefit	22	160	64
10. Questionable moral values resulting from too strong a desire to win	17	47	129
11. Pupil transportation, and the conduct of pupils on trips	40	83	117
12. Conduct of pupils during and after contests	30	32	144
13. Conduct of spectators during contests...	30	89	109
14. Falling off in scholarship among contestants	14	56	125
15. Physical hazards to contestants	16	65	108

¹ From Brammell, *op. cit.*, p. 129.

TABLE V—(Continued)

Problem	Has been but is no longer trouble- some	Is at present trouble- some	Has never (under present régime) been trouble- some
16. Tendency to copy colleges in kinds of sport engaged in and in manner of conducting them	9	38	125
17. Tendency among athletic coaches to direct outstanding athletes to their alma mater institutions	31	137
18. Inducements to high-school athletes offered by private individuals, alumni, business men, or other persons interested in certain higher institutions	8	44	98
19. Tendency of athletics to bring into prominence in school life undesirable boys (for class officers, etc.)	1	1
20. Tendency towards distorted standards, due largely to newspaper publicity	2	...
21. Keeping up of morale with a losing team	1	...
22. Crowding out of other activities	1	...
23. Difficulty in getting competent officials	1	...
24. Securing proper carry-over value for competitive athletics	2	...
25. Difficulty of raising money properly to equip teams and maintain facilities.....	...	1	...
26. Too much time taken from intramural program which benefits the many. Physical education teachers put too much emphasis and time on coaching athletic teams	1	...
27. Subterfuge in observing rules of eligibility	1	...
28. Neglect of school work by coach.....	...	1	...

institutional athletics being supported by funds appropriated by state legislatures or derived from institutional endowments. Persons engaged in physical education should work unceasingly, however, to interpret to all citizens the importance of paying the cost of the facilities, administration, and instruction for all phases of physical education out of educational funds. As long as athletics must be administered from a commercial point of view in order to earn money, it will be difficult to make them of worthwhile educational significance.

The number of athletic contests. In connection with the National Survey of Secondary Education, 231 secondary schools reported that sixty-five sports were included in their intramural athletic programs.¹ Approximately 300 schools reported only twenty-six sports as part of their interscholastic athletic program. This study shows that among the schools included in this survey, interscholastic athletic contests are limited largely to the five sports: basketball, football, baseball, track and field, and tennis. A smaller but significant number of schools conduct interscholastic contests in swimming and golf. The table on page 282 shows the number of secondary schools reporting intercity and intracity athletic contests in twelve sports for boys and girls. It will be observed that more schools reported teams for boys than for girls in all sports with the exception of volley ball. Basketball is by far the most popular sport for interschool competition for girls in this group of schools. It should be remembered that these schools were chosen for this study because they were reported to have unusually successful athletic programs. It seems evident, therefore, that even in the secondary schools which have the best athletic programs, interscholastic contests are organized in only a small number of sports. It is indicated also that more than one-third of these schools have interscholastic competition in basketball for girls.

It is agreed among leaders in physical education that the number of games for boys in the football schedule should be not more than eight; the number of basketball games should not exceed fifteen; the baseball teams should compete in not more than fifteen games; and the track team should participate in a maximum of seven interscholastic contests. The number of games included in the schedules for other sports should also be limited to the extent that participation by the pupils may be healthful, enjoyable and educational.

"Give back the game to the players." During the last few years there has been considerable discussion among persons interested in athletics concerning the proposal to eliminate adult direction and control from the athletic contests of school boys. This plan has had more attention given to it in the high schools of New York than in

¹ *Ibid.*, pp. 49-50.

TABLE VI¹
SUMMARY OF REPORTS FROM 327 SECONDARY SCHOOLS ON INTRACITY AND INTERCITY
ATHLETIC CONTESTS IN 12 SPORTS AND CONTESTS FOR BOYS AND GIRLS

Type of Contest or Sex of Participants	Sport											
	Basket Ball	Football	Track and Field	Baseball	Tennis	Golf	Swimming	Soccer	Cross Country	Wrestling	Hockey	Volley Ball
Intracity	115	87	74	74	53	30	27	11	18	6	12	10
Intercity	251	198	156	141	84	39	33	19	19	13	17	10
Boys	284	220	199	171	106	58	45	27	33	18	19	6
Girls	124	...	31	14	33	3	9	1	1	...	12	14

¹ *Ibid.*, p. 50.

any other state. The New York State High School Athletic Association incorporated this policy in their General Regulation No. 1 and made it mandatory for a period of time in sectional, semifinal, and state contests. In December, 1929, the State Central Committee modified the mandatory feature of this regulation and made the "player-control" conduct of games optional. The salient features of "player-control" have been given in the yearbook of the New York State Public High School Athletic Association for 1930-31 as follows:

1. After a contest has begun, no coach or adult, other than officials of the game, shall interfere with activity of contestants.
2. All directions for team play and all signals shall be given, and all substitutions shall be made by the captain or acting captain.
3. A coach may order withdrawal of a player at any time, but no player, withdrawn by a coach or his representative may return to the same contest. In case of withdrawal of a player by a coach, the captain or acting captain shall name the substituted player.
4. Coaches may attend to physical injuries of their team members at any time during games or between periods of play.
5. In all cases or applications, not specifically covered in the above, the interpretation of the rule shall govern, which conduces to develop responsibility and resourcefulness on the part of the captain and responsiveness to teammate control and true loyalty and team play on the part of the players.

From an educational point of view, this plan is to be commended. Modern pedagogical principles emphasize the importance of activity by the learner in all learning situations. It is essential for boys and girls consciously to make an intelligent effort to solve their own problems in order that their ability to solve problems may grow. Teachers should remain in the background as much as possible in all educational situations, so as to permit the maximum amount of self-directed activity by the pupils.

A study made in connection with the National Survey of Secondary Education¹ indicates that in many situations where this plan has been given a fair trial it has not always been considered practical or desirable. In most cases every one agreed that the ideals involved were sound and acceptable but that, in the application of these ideals to definite athletic situations, there frequently emerged more disadvantages than advantages. A number of schools are still using the "player-control" plan and are enthusiastic about it. It seems, however, that a majority of the schools which have tried this plan have abandoned it.

Participation in tournaments and meets. There is a distinct sentiment among the principals of secondary schools in the United States

¹ *Ibid.*, pp. 123-24.

against state, sectional, and national tournaments in athletic games. Tournaments to determine various kinds of championships are still participated in by many schools, but the available data indicate that the majority of school administrators are unfavorable to tournaments which require long trips and interruption of the regular school routine. This sentiment is illustrated by the following resolution adopted by the Department of Superintendence of the National Education Association at the meeting held in Washington, February, 1932:

We view with disfavor the tendency toward the multiplication of district, sectional, state and national contests. The contests now embrace every conceivable activity—some conducted by professional organizations with a high purpose, but many representing only thinly veiled commercial interests. Regardless of sponsorship these state contests involve almost certain disorganization of school work, solicitation of funds for their financial support, special preparation, and great nervous strain on the part of the contestants. Therefore, we feel that such district, state and national contests should be discouraged, and eventually, unless of proved social and educational value, abolished.

The action of the authorities at the University of Chicago in discontinuing the National Basketball Tournament is also indicative of the attitude of educators toward tournaments. The New York *Telegram* for December 9, 1930, reported this action as follows:

Permanent discontinuance of the annual University of Chicago national scholastic basketball tournament was announced by Director of Athletics, A. A. Stagg. Director Stagg's decision to drop the meet, one of the most colorful pageants of the sports year, followed adoption by university authorities of a recommendation made by a committee of three members of the faculty. The committee recommending discontinuance of the meet sent letters to principals of all high schools which participated in the tournament between 1921 and 1930, asking opinions as to the desirability of continuing the meet.

Replies showed 89 principals opposed to the meet, 30 in favor of its retention, and 13 undecided. The university, therefore, acted on the sentiment of participating schools.

It is interesting to observe, as a side-light in this connection, that practically none of the 273 separate schools which entered the National Basketball Tournament at the University of Chicago since 1921 were included in the study on intramural and interscholastic athletics made by the National Survey of Secondary Education. The names of the schools included in this study were submitted to the committee in charge of the survey by the state school officials as doing outstanding work in the field of athletics.¹

¹ *Ibid.*, pp. 4-5.

It seems to be the opinion of most principals of secondary schools that tournaments should be organized on the basis of leagues or of districts, extending over relatively limited areas. It is believed that by this means may be secured the values of tournament play which include the socializing influences and the motivation and stimulation of interest and effort on the part of the pupils, without the disadvantages connected with participation in state and national tournaments.

The value of athletic leagues. In most states it is practicable to organize leagues which will include schools close together in the same section of the state. There has been considerable progress made in some states in the organization of local leagues which provide rules and schedules for schools of approximately the same size, located within easy driving distance of each other. When a number of similar schools organize in this way, it is relatively easy to avoid most of the disadvantages of interscholastic games. This is true because many of the objections to athletics arise from the effort of small schools to compete successfully with much larger schools; the artificially stimulated desire by schools to win state, sectional, and national championships; the cost in time, money, and effort of teams traveling long distances to play games; and the elaborate administrative machinery required to maintain and operate state high school athletic associations and other organizations which are necessary to promote and conduct competition between schools situated at points over a large area.

It is recommended that schools of approximately the same size, which are located within a radius of not more than seventy-five miles, should organize themselves into leagues. The interscholastic athletic competition of the schools in each league should be restricted largely to the league membership. Each league should adopt such rules and regulations and arrange such schedules as seem wise and desirable to the members.

State high school athletic associations. In nearly every state there is a state high school athletic association whose membership includes most of the high schools of each state. These associations usually are concerned with the development and enforcement of eligibility rules and with the promotion and conduct of tournaments and meets for determining championships. Some associations frequently carry on other types of activities which contribute to the efficient and successful administration of eligibility rules and tournaments. Some of these supplementary activities are the publication of lists of approved officials, holding meetings for the interpretation of rules, prohibiting postseason games and preseason practice, regulating the

length of schedules, requiring the use of standard forms for records and reports, and proposing standards for choosing coaches. All of these services are valuable.

The plan of organization followed by the different state high school athletic associations varies considerably. The plan which has been found satisfactory in several states divides a state into several districts with a district board in charge of each district. The members of each district board choose the chairman and secretary of the board and also one representative to represent the district on the state board of control. The state board in several states is designated as the central board of control, and is responsible for the administration of the affairs of the association on a statewide basis. It is usually the final court of appeal to which decisions of the district boards may be carried. This form of organization provides for an interlocking membership on the central state board of control and the district boards throughout the state. This is believed to be desirable. All eligible schools in a state should be members of the state high school athletic association and should work to make the association of the greatest possible constructive value.

Wide-awake and progressive educators should not accept the plan of organization and type of service rendered by any state high school athletic association as being entirely satisfactory and the best which can be secured. It is relatively easy for an organization of this kind to become ultraconservative and fixed as to its policies. This is likely to be especially so in states that have full-time commissioners of athletics and full-time permanent secretaries of the athletic associations. These men and their supporters, in most instances, are very much interested in holding their positions and in carrying forward the programs which have been projected. This makes it especially difficult in some cases to bring about any change in the established order of athletic procedures and policies in the high schools.

The problem of championships. One of the main functions of many state high school athletic associations is to determine athletic championships of many different kinds and varieties. There is ample evidence to justify one in doubting whether championships are defensible from any point of view. The persons who believe in championships point out the values to be: (1) the educative and socializing effects of travel; (2) the development of a higher type of skill and understanding in playing the game; (3) the deflation of the ego of players and teams who have excelled in local and district competition; (4) the stimulation of interest in sports among a large number of pupils; and (5) the development of interest among the citizens of a community which may result in better facilities for physical edu-

cation.¹ Many persons do not believe that providing an opportunity for one team to win a championship is the most effective way of securing these results in a large number of communities. It has also been pointed out that these outcomes can be achieved more directly, economically, and successfully by means other than interscholastic athletic championships.

It seems to be true that there is a high degree of hazard to the physical health of pupils who participate in championship contests. Many competent observers state that the striving for championship honors tends to develop antisocial traits of character in high school children. It has also been pointed out that the emphasis on winning championships interferes with the development of an inclusive physical education program for all the pupils in school. Rogers has written that:

"The worst result of championships, like that of war, is the warped souls of those who live through them. Specifically, championships pervert the points of view of physical educators who coach representative school teams, and those of pupils who play. When properly conceived, victory is wholly desirable, but struggles for championship honors, with their attendant results in heightened selfishness and degraded human sympathies, are wholly undesirable in adolescent life, in democratic education, or indeed, in any social life."²

In regard to state championships, Williams says:

The experience of to-day controls in part the reaction of to-morrow; hence since there is inevitable duration in life experiences, all activities are to be viewed in relation not only to present characteristics but also in relation to future outcomes. We should ask ourselves, then, to what future experiences of real worth do state championships lead. Are we dealing here with a highly volatile experience that goes off like a rocket only to end in the inevitable descent, as a broken thing, a charred stick, a smoking fire from which the light has gone out? If you view state championships educationally, you can only come to this conclusion, it seems to me: state championships are blind alleys. . . . Moreover, from a certain view of physical education they are unsound because they are not physically wholesome.³

The claims for the values of championships cannot be substantiated and the weight of evidence and authoritative opinion indicate that there is a strong probability of much harm resulting from them. It is indicated, therefore, that high school athletic associations and individual schools should direct their energies toward providing partici-

¹ Frederick Rand Rogers, *The Future of Interscholastic Athletics*, pp. 22-53. New York: Teachers College, Columbia University, 1929.

² *Ibid.*, p. 42.

³ Jesse Peirce Williams, "Are State Championships Educationally Sound?" *American Physical Education Review*, 33 (December, 1928), pp. 644-45.

pation and competition in athletics between pupils of approximately equal ability rather than in concentrating on choosing champions.

Eligibility of athletes. Almost every athletic league, association and conference has a large number of eligibility rules to which athletes must conform in order to participate in competitive sports. These eligibility rules include such items as the length of time a student has been in school, his record in academic subjects, his regularity of attendance at school, the kind of program of studies he is carrying, and his amateur status in terms of whether or not he has received any money or other material benefit from participating in sports. It should be observed that eligibility rules and amateur rules are not synonymous. The question of amateurism is a greater issue and problem in connection with athletics conducted by organizations outside of the school than it is in educational institutions.

The fundamental purpose of eligibility rules is to maintain equality between individuals and groups for purposes of competition. It is clearly evident, however, that the observance of the same eligibility rules by two schools does not guarantee equality of ability between the teams representing the schools. The way in which equality may be secured is through the development and use of scientific methods for measuring the ability and skill of athletes. In such a way schedules could be arranged between teams of pupils whose ability and skill were approximately equal, thereby making the victory more largely dependent on the physical condition of the players and the application of strategy and intelligence to the solution of the problems which arise in the games. It is indicated, therefore, that eligibility rules imposed by organizations outside each school, such as state high school athletic associations and athletic conferences, should receive the minimum of time and consideration. The interest of these organizations and of individual schools should be directed to the development of techniques for measuring athletic ability so that a more scientific and accurate means might be used to secure equality between competitors. It is plainly evident that the heavy-weight boxing champion of the world should receive no credit or commendation for defeating the light-weight champion or for battering into a coma some husky, unskilled farmer boy. Competition equally as unfair takes place between many high school and college athletic teams. It is feasible and practicable to equalize teams on the basis of athletic ability. Persons and organizations interested in the betterment of athletics should, therefore, prosecute the study of this problem until a satisfactory solution is found.

Inadequacy of present amateur standards. The present standards for differentiating between an amateur and professional in athletics

should be discarded. This phase of the problem of eligibility for participation in athletics should be attacked from an entirely new angle and should be dominated by a different point of view or philosophy. Under the rulings now in vogue, an effort is made to equalize competition on the basis of whether or not a boy has ever earned any money in connection with athletics. It is assumed that if an athlete is skillful enough as a player to command some remuneration, he is too expert to compete with others who have not the ability to earn money as players. It is plainly evident that such a technique of measuring athletic ability is extremely crude and cannot in any sense be termed a valid or reliable measure of competitive skill.

The Amateur Code which governs athletic competition in the United States has developed under the influence of a snobbish point of view that places in an inferior class a person who earns money in athletics. We borrowed this attitude from England many years ago, along with many of the sports which have proved so popular in America. The application of this code works in such a way as to favor and inflate the ego of the individuals who have sufficient financial resources to enable them to spend a great amount of time in sports. It discriminates against those who of necessity must earn a living, and therefore has no place in a democratic society such as America is attempting to maintain.

Athletes should be classified in terms of ability. This would necessitate the acceptance of entirely new criteria for classification. The question as to whether a person has ever earned money in connection with athletics or in any other way, should not be a factor in determining these criteria. At the present time there are not available adequate scientific instruments for measuring accurately the ability of athletes but an excellent start has been made in the work of such men as Brace, Rogers, and McCloy. The recognition of the need for better methods should stimulate educators and research specialists to develop satisfactory techniques for classification. The problem is not an impossible one by any means and could be solved in a comparatively short period of time if enough emphasis were placed upon the need for valid and reliable measures of athletic ability.

If this plan were put in operation athletes might be placed in three classes, such as novice, journeyman, and master athletes. Competition should be conducted between teams composed of an equal number of athletes in each class. This would provide fair competition between teams of boys grouped on the basis of athletic ability instead of on the basis of the economic status of their families.

The coach of athletics. It is believed by many persons that the coach of athletics has more influence for good or evil than any other

member of a high school or college faculty. It has been stated that he is in the most strategic position of any teacher to lead boys in the development of social and moral traits which enter prominently into the formation of character. Since it is universally agreed that the coach occupies such an important position in the educational experiences of students, it is essential that he be a person of high ideals and exceptional ability. The following table from a study by Wagenhorst shows how important educators believe it is for coaches to be persons of the highest type.

TABLE VII¹

RANKING OF THE TEN MOST DESIRABLE QUALITIES OF THE HIGH SCHOOL ATHLETIC COACH IN THE JUDGMENT OF 85 SUPERINTENDENTS, 85 HIGH SCHOOL PRINCIPALS, 85 HIGH SCHOOL TEACHERS, AND 85 TEACHERS OF PHYSICAL EDUCATION

Desirable Qualities of High School Athletic Coach	Superintendents	High School Principal	High School Teachers	Teachers of Physical Education	Rank of Combined Judgments
Irreproachable moral character	1	1	1	1	1
Readiness to coöperate.....	2	5	5	7.5	5
Effective leader	3	2	2	2	2
Theoretical knowledge of physical education	4	4	7	3	4
Fair under all circumstances..	5	3	3	5	3
Thorough knowledge of high school athletic sports	6	6	4	4	6
Attractive personality	7	8	6	6	7
Athletic experience	8	7	8	9.5	8
Teaching ability	9	9.5	..	...	10
Strong social qualities	10	...	10	...	..
Enthusiasm .....	..	9.5	..	7.5	9
Scholarship .....	..	...	9	...	..
Strong physique .....	..	...	..	9.5	..

¹ Lewis Hoch Wagenhorst, *The Administration and Cost of High School Interscholastic Athletics*, p. 87. New York: Teachers College, Columbia University, 1926.

Summary. The responsibility for the administration of athletics in public schools and in colleges should rest on the superintendent of schools or the president of the college. These officers of administration have the primary responsibility for the administration of athletics in the same way that they are responsible for the rest of the educational program. Sound principles of administration should be applied to the organization of the department, the selection of the staff, the handling of funds, publicity, and purchases; such administration being as important here as in other phases of the school organization.

Athletics should be recognized as an integral part of physical education and should contribute to the educational objectives of physical education. Athletics should be organized into an unified administrative unit with the other parts of physical education. In the administration of interinstitutional athletics there are a number of problems which must be solved. These include such things as the eligibility of athletes, the transportation of teams, the conduct of pupils on trips, the interference by athletic contests with the regular school work, the behavior of pupils and other spectators during and after games, publicity for athletics, providing for maximum participation, and precautions against injuries.

If athletics are accepted as having educational values they should be supported by funds derived from taxes or endowments in the same way that other parts of the educational program are supported. The number of contests in each sport should be limited to the extent that participation by the pupils may be healthful, enjoyable and educational. The plan used in connection with athletic contests popularly described by the admonition to "Give back the game to the boys," has been tried in a number of places. Most schools have abandoned it after a trial. It is agreed that the fundamental principles are sound; therefore physical educators should make a most determined effort to make such a plan work from an administrative point of view.

There is a distinct sentiment among the educators in the United States against state, sectional and national tournaments in athletic games. The organization of leagues by schools of approximately the same size located within a radius of seventy-five miles is recommended as one method by which satisfactory interscholastic competition may be carried on. State high school athletic associations exist in most states. These associations are usually concerned with the development and enforcement of eligibility rules and with the promotion and conduct of tournaments and meets for determining championships. It is believed that these organizations could render a more valuable type of service if they were to direct their energies toward perfecting and popularizing a scientific method of measuring athletic ability. This

would make possible competition between individuals and groups of approximately the same ability and provide a relative degree of equality of competition.

The claims for the values of championships cannot be substantiated and the weight of evidence and authoritative opinion indicates that there is a strong probability of much harm resulting from them. It seems also, that the present amateur standards are antiquated and should be discarded. The coach of athletics has many opportunities for exerting good or evil influences on the pupils in a school. It is essential, therefore, that he be a person of sterling character and highest ideals.

QUESTIONS

1. What are the important administrative practices which should be followed in the administration of athletics?
2. What administrative policies and objectives should be accepted in connection with the administration of athletics?
3. What are some of the detail administrative problems which must be successfully solved in the administration of athletics?
4. What fundamental principles of education are applicable to the plan to "Give back the game to the players"?
5. What are some indications of the sentiment of educators concerning state and national tournaments?
6. How can athletic leagues be used to an advantage in connection with inter-scholastic athletics?
7. What are apparently the main functions of state high school athletic associations? How might these associations render a greater service to the cause of athletics?
8. What are claimed to be the values of championships? What are some of the ill effects which might come from participation in championship contests?
9. How might the present amateur standards be changed for the better?
10. How should the coach of athletics be selected and what type of person should he be?

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CHAPTER XVII

PHYSICAL EDUCATION AS A VOCATION

The social significance of teaching. The maintenance of a reasonably stable social order in a democracy depends on universal education. In a society where all the people have the right to express themselves in regard to political and social questions it is essential that they have preparation which will help them to consider problems intelligently. The need for the education of all the people has become greater each year since the founding of this country. This need is increasingly urgent because our society is becoming constantly more complex and the right of every man and woman to vote without any qualifications or restrictions has become a generally accepted principle.

In the preparation of people for living successfully in a democratic society the teacher plays the most important part. The teacher is the basic factor in the educational process, and the quality of the teacher largely determines the quality of the results. An intelligent, well prepared teacher with a wholesome personality and sound philosophy of education has a greater opportunity than any other member of society to prepare boys and girls to be good citizens.

The situations that arise in teaching physical education are particularly rich in educational opportunities. Physical education teachers can probably have more influence in developing the attitudes and shaping the ideals of their pupils than teachers in any other field. These opportunities, combined with those for the increase in vitality through the development of the organic systems of the body, and for the preparation of individuals in leisure-time activities, place teachers of physical education in a most strategic and challenging position.

Types of work open to physical education teachers. There are several kinds of positions that persons well prepared in physical education are qualified to fill. The most numerous positions are those as teachers of physical education in high schools and colleges. For men this type of position frequently includes the coaching of athletic teams. Teachers who accept positions of this kind usually must be qualified to teach all phases of the physical education program. There are, however, some positions in the larger colleges and high schools for technicians who are specialists in some one phase of physical education. This group includes persons who have specialized in some

one type of activity such as dancing, swimming, gymnastics, or some sport such as football or basketball. Some physical education teachers have specialized in medical gymnastics and physiotherapy and practice their vocation in this field, under the direction of orthopedic physicians.

Recreation work is another field which appeals to some individuals who are prepared in physical education. Many of these persons are employed at municipal playgrounds and recreation centers. Others are engaged in settlement and church recreation work. Scout work, Young Men's Christian Associations, Young Women's Christian Associations, Young Men's Hebrew Associations, and other social, religious, and philanthropic organizations provide opportunity of service for physical educators.

Organized camping has attracted a large number of persons who have had professional preparation in physical education. Many of the pioneers and leaders in the camping movement have been physical educators. The philosophy, ideals, and spirit of physical education is the same which should dominate camp work. Professional preparation in physical education does not prepare one specifically for being a camp director. Many of the responsibilities of such a position are somewhat similar to those of a principal of a boarding school. Since the core of most camp programs includes outdoor sports and recreations, professional preparation in physical education serves as a good basis for successful camp leadership.

Some men and women who have studied physical education have become interested in some phase of the school health program and are employed as teachers of hygiene and health counselors in schools. Persons who are interested in rendering professional service in this field, should give careful attention to planning their professional preparation so as to achieve the needed training.

The preparation needed to teach physical education. A teacher of physical education in an elementary school or high school should have a minimum of four years of professional preparation beyond high school graduation. This preparation should include basic courses in such science fields as biology, anatomy, chemistry, hygiene, physiology, psychology, and sociology; such general courses in physical education as the administration of physical education, principles of physical education, and research in physical education; courses in physical activity and the methods of teaching physical activity; courses in education, including directed teaching; and elective courses from the other fields of human knowledge. It is probable that a person with less than four years of professional preparation may render satisfactory service as a technician in some one phase of physical education. The irreducible minimum, however, of training

for teachers of physical education should be the amount of study represented by four years of college work.

A supervisor of physical education should have a minimum of five years of professional preparation beyond high school graduation. A director of physical education in a large city or in a college should hold the degree of Doctor of Philosophy with specialization in physical and health education, or the degree of Doctor of Medicine with professional preparation in education equivalent to that required for a Master's degree.

The economic status of physical education teachers. The financial income which might be secured from any occupation should not be the primary consideration of a person in choosing a vocation. It is essential, however, for one to choose a field of endeavor from which it will be possible to earn a satisfactory livelihood. Studies which have been made on the salaries of teachers indicate that qualified teachers of physical education receive an income which enables them to maintain a satisfactory standard of living. Men teachers receive somewhat larger salaries than women, and teachers in the larger cities receive salaries about twenty per cent larger on the average than teachers in cities of less than 10,000 population. College teachers as a rule receive the largest salaries of any group of physical education teachers.

Incomes of physical education teachers compared with other incomes. A number of studies have been made which show the average income of persons engaged in various occupations. It is interesting to a person who is considering the advantages and disadvantages of different professions to compare the average amount earned by practitioners in the various professions. Anderson¹ has compiled some data from studies which were made on the income of different professional groups during the years 1926 to 1930. It is probable that the total earnings in each case have changed somewhat since the time of these studies. The table on page 296 shows the average net incomes in eight different professional groups. The net incomes were estimated after the gross incomes were determined. It is believed, however, that these somewhat arbitrary estimates are reasonably accurate. The comparative figures included in this table are generally for college graduates only, with the exception of the group of nurses.

All the studies which have been reported on the earnings of college graduates show that with the exception of men who are college teachers and superintendents of schools, the average income of teachers ranks among the lowest of the professions.

¹ Earl H. Anderson, "Salaries in Certain Professions," *Educational Research Bulletin*, XII (January 11, 1933), pp. 1-9.

TABLE VIII
NET INCOMES IN VARIOUS PROFESSIONS

PROFESSION	AVERAGE INCOME					
	First Four Years	5-9 Years	10-14 Years	15-19 Years	20-24 Years	30-34 Years
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Medicine	\$3,266	\$5,902	\$ 6,638	\$7,508	\$7,453	\$ 6,178
2. Dentistry	2,995	4,712	5,813	5,507	5,301	4,644
3. Law	1,897	2,660	3,835	5,190	7,291	9,350
4. Engineering	1,494	2,645	3,187	3,825	4,845	6,375
5. Veterinary medicine	1,938	2,797	4,743	4,258	6,591	6,103
6. Journalism	2,272	4,541	6,205	5,600	.....	.....
7. Investment banking	2,350	7,700	10,000	.....	.....	.....
8. Nursing .....	.....	.....	.....	.....	.....	.....
Private duty	1,300	1,340	1,300	.....	.....	.....
Institutional	1,825	2,050	2,200	2,200	.....	.....
Public health	1,475	1,660	1,750	1,800	1,900	.....

Within the teaching profession, however, the average income of physical education teachers compares favorably with the income of teachers in other fields. It seems to be true, also, that persons in physical education receive the better salaries at an earlier age than do teachers in other fields. A person who is thinking of preparing himself for professional service in the field of physical education should make an intelligent and critical evaluation of the advantages and disadvantages of physical education as a vocation. One should not permit his decisions to be influenced by newspaper reports of an occasional large salary received by a college football coach. Such incomes are not common in the teaching profession.

Although the financial income received from teaching is not large as compared to that from other professions, there are satisfactions which some persons get from work with young people which make teaching attractive to them. In many situations there is also a type and degree of security which teachers have that is not available to persons engaged in other lines of work. Considerable progress has been made in some states in the development and improvement of salary schedules, in provisions to make the tenure of teachers more secure, in plans for the retirement and payment of pensions to teachers, and in adequate state programs for the certification of teachers. Progress along these lines will help to make teaching a more attractive vocation.

Salary schedules. A majority of cities and some states have adopted salary schedules, which make it possible for a teacher to receive regular increases in salary and to know in advance to what maximum salary he may attain. A salary schedule also enables a teacher to know under what conditions he will receive an increase in salary. The more widespread use of salary schedules based on fair and sound principles will help to make the profession of teaching more attractive to superior men and women.

Tenure of teachers. The indefiniteness and insecurity of tenure is one of the main drawbacks to teaching as a vocation. It has been pointed out that other public employees, such as policemen, firemen, and clerks, in nearly all situations have more security of tenure than do teachers. There has been carried on in educational circles much discussion of this problem and some states have laws which guarantee permanent tenure to teachers after a probationary period of about two or three years. Although there are many arguments in favor of permanent tenure for teachers it seems that the preponderance of evidence and opinion is against the passage of such laws. It is agreed by practically all students of this problem that teachers should be elected to their positions for an indefinite period, after a short probationary period, but that they should not be guaranteed permanent tenure by legislative enactment.

Pensions for teachers. Approximately half of the states and about twenty cities have a plan for the retirement of teachers. All of the retirement systems are not actuarially sound but it seems that most of them are functioning with a reasonable degree of success on a sound business basis. The retirement funds are generally secured through the payment by all teachers in a city or state of a small percentage of their salaries and a contribution from the public treasury. This public appropriation frequently is equal in amount to that deposited by the teachers. An age is usually set beyond which teachers are required to retire and a minimum age is set at which teachers may retire. Seventy years of age is usually the maximum age and sixty years the minimum age for retirement.¹

The development of sound and adequate retirement systems in all states will add to the economic security of teachers, thereby increasing the effectiveness of the schools and making teaching more desirable as a vocation.

The certification of teachers. Considerable improvement has been made in the plans for certification of teachers during the past two decades. Until a few years ago most any one who wished to teach

¹ Agnes Snyder and Thomas Alexander, *Teaching as a Profession*, pp. 49-50. Teachers College Bulletin, 23rd series, No. 3, Teachers College, Columbia University, 1932.

could do so provided he could find some board of education to employ him. In many states there are still inadequate and inefficient programs for the certification of teachers. There should be in each state one central authority for the issuance of all certificates. This authority should preferably be the state department of education. Teachers should be issued credentials to teach the subjects for which they have adequate professional preparation, and it should be unlawful for any teacher to teach a subject for which he does not hold a credential.

A satisfactory certification system is necessary in order to protect the children who attend the schools from inferior teaching, and to protect professionally qualified teachers from unfair and unethical competition with persons who are unfit to teach. The progress which has been made in the development of sound programs of teacher certification has done much to raise the professional standards of education. Further development along this line, which may reasonably be expected, will help to place teaching more definitely on a professional status.

Physical education as a profession. Teachers of physical education along with teachers in other fields do not enjoy full professional status such as that held by members of the older and more definitely organized professions of law and medicine. There are at least five prominent characteristics of a profession. These are: (1) that the members of the group are motivated largely by ideals of service rather than by a selfish desire for personal gain and advancement; (2) that there is a large body of well organized technical knowledge and skill underlying the practice; (3) that there is required a protracted period of professional preparation for admission to the group; (4) that the practitioners who enter the group do so with the idea of remaining in it permanently; and (5) the members of the group are organized into a strong and efficient professional organization.¹

Ideals of service. The high professional ideals, the ethical behavior, and the unshirking acceptance of responsibility on the part of physical education teachers will serve to increase their professional influence. A large majority of physical education teachers must develop a definite philosophy of life and of education in order that they may make their work more effective. They must appreciate their opportunities to be of service to their pupils and to society as a whole, and realize that they have the unusual privilege of building for themselves a type of immortality that few people have. Only so long and to the extent that physical educators hold to these ideals will their

¹ Ralph Domfeld Owen, "The Census and the Teaching Profession," *The Phi Delta Kappan*, XIII (December, 1930), 97.

influence be felt in the upbuilding of the teaching profession. The highest ideals should motivate all teachers.

Technical knowledge and skill. There is a large mass of technical knowledge and skill fundamental to the teaching of physical education. Many of the teachers in this field are masters of the skills and available knowledge and are seriously and consistently working to add valuable material to the authoritative sources by means of research. If physical education teachers are to achieve to a real professional status it is essential that they accumulate and be familiar with a large body of accurate knowledge and skill peculiar to their field and stated in technical language, which will have the same meaning to all persons with adequate professional preparation.

A protracted period of professional preparation. Four years of professional preparation beyond high school graduation is a generally recognized minimum standard for teachers of physical education. Supervisors and directors are usually required to have five years of professional preparation, and research specialists six years or more. Uniform standards of preparation at least this high must be maintained in order to develop physical education as a profession. It is most important for their professional welfare that teachers insist individually and collectively that the certificating authorities issue a certificate to no one to teach or supervise physical education who has less than this amount of professional preparation.

Membership for life. Since the preparation of teachers of physical education requires a relatively long period and there is a considerable body of technical material to be mastered, it is probably true that a large number of persons who begin teaching physical education do so with the intention of remaining in the work as an occupation for life. This permanency in the membership of the group is an important factor in establishing physical education as a profession and in making physical education teachers a real and dominant influence in education.

A strong and efficient professional organization. If the members of any profession expect to be recognized as professional workers it is important that they have a strong professional organization. In physical education there are strong and growing national and sectional organizations and in some states there are strong state groups. The publications that are issued by these organizations, their conventions, and the encouragement and stimulation that has been provided by them have aided in making teachers of physical education more ethical, professional, and efficient and thereby enabling them to have a more constructive influence on the public school program. There is probably no one thing that physical education teachers can

do that will advance so well their personal interest and the interest of their profession as the enthusiastic support of their professional organizations.

Chances of securing a position. Data available from a number of institutions engaged in the professional preparation of teachers indicate that physical education teachers are as successful as teachers in other fields in securing positions.

There has always been a serious shortage of well qualified teachers in the United States, although the employment of many ill-trained or untrained teachers has often given the appearance of an over-supply of teachers. Improvement in regulations and laws concerning the certification of teachers, and the development on the part of employing authorities of a better appreciation of the importance of qualified teachers will result in nearly all good teachers being able to secure satisfactory positions.

The social and industrial trends in this country indicate that the demand for physical education teachers and recreational leaders will increase. Already a working week of thirty-five hours has been accepted in many industries and it seems probable that the thirty-hour week will become a reality. These developments will create leisure-time problems of great significance to physical education which will have to be recognized and provided for by members of society.

Persons who should teach physical education. In any occupation there are some aspects of the work which might appeal to a person and other features which might prove to be objectionable. Since individuals differ in temperament and interests, the things which seem to be advantages to one individual may appear to be disadvantages to another. It seems desirable, therefore, for a person who is considering the choice of a vocation to list the advantages and disadvantages of each occupation under consideration. In making such an evaluation one is really studying himself as well as the vocation. This is a desirable thing to do when one is trying to make a choice of a life vocation.

Characteristics of successful teachers of physical education. A facetious statement concerning what a teacher must have in order to be successful has been made by Superintendent H. O. Cooper of the Brockport, New York, public schools. He said that a successful teacher must have:

The education of a college president
The executive ability of a financier
The craftiness of a politician
The humility of a deacon
The discipline of a demon

The adaptation of a chameleon
The hope of an optimist
The courage of a hero
The wisdom of a serpent
The gentleness of a dove
The patience of a JOB
The grace of GOD—And
The persistence of the devil.

It seems, no doubt, to teachers in many situations that this statement is no exaggeration. There are, however, certain characteristics which expert opinion and the result of studies show to be essential in successful teachers of physical education. The two characteristics which are of outstanding importance to a teacher are: (1) teaching ability which will be considered satisfactory by school authorities, and (2) ability to exhibit excellent traits of character in all his behavior.

Monroe¹ has reported a questionnaire study on the opinions of 841 men, engaged as athletic coaches and teachers of physical education in high schools, concerning the conditions which these men considered most important for retaining their positions.

"Personal Character" was named by slightly more than two-fifths (43 per cent) and "teaching ability" by a slightly smaller proportion (39 per cent). Only five checked "political influence," and "winning teams" was indicated by 91 (11 per cent). "Popularity in the community" was checked by only 32 but 17 of these are in the fifth group of cities (population of 2500-4999), which suggests that this is a more important factor in small communities.

Why some teachers fail. Failure to maintain an unimpeachable standard of acceptable moral conduct, incompetency as a teacher in the classroom and on the athletic field, and an unwillingness to co-operate with the policies of the school administration have been listed by Weidemann² as the three most important reasons why men teachers of physical education fail.

The following summary of the studies of teacher failure is given in a review of educational research³ published in 1931:

8 studies give as causes: Poor instruction and lack of discipline.

6 studies give as causes: Inability to coöperate and lack of scholarship.

4 studies give as causes: Personality defects and laziness.

¹ Walter S. Monroe, *The Duties of Men Engaged as Physical Directors or Athletic Coaches in High Schools*, p. 15. Bulletin No. 30. Bureau of Educational Research. Urbana: University of Illinois, 1926.

² C. C. Weidemann, "Why Do Physical Education Instructors Fail and Why Do They Succeed?" *Educational Research Record*, I (October, 1928), 3.

³ "Teacher Selection and Placement," *Review of Educational Research*, I (April, 1931), 82-85.

3 studies give as causes: Lack of interest in work, lack of preparation, and lack of sympathy.

1 or 2 studies give as causes: Lack of judgment, inability to understand children, deficiency in enthusiasm and optimism, lack of initiative, indiscreet conduct, inability to get along with pupils, gossip, temper, too many dates, intimacy with pupils.

Cubberley¹ has stated that the following things are the most important in causing teachers to fail:

Weakness in discipline, poor instruction, deficiencies in scholarship, lack of personality, and faulty instructional methods head the list. Following these causes come lack of interest in teaching, insufficient daily preparation, want of sympathy with children, and need of good judgment. Poor health and nervousness follow closely here. Then come deficiency in social understandings, lack of personal culture, unprofessional attitudes, and inability to co-operate with others. Immorality, disloyalty, and frivolous conduct come near the bottom of the list.

. . . Enrolling in a profession to which one does not by nature belong, failure to make the necessary preparation, neglect to become a student of children and books, lack of interest in the work, weakness in personality—these are the chief causes of teaching failure to-day.

It may be observed as pointed out by Snyder and Alexander² that the causes of the failure of teachers given by Cubberley and the ones included in the summary of research studies are similar to a considerable extent. The large number of high school athletic coaches, included in Weidemann's study who lost their positions on account of undesirable personal habits seems to indicate that possibly athletic coaches might be more likely to be deficient along this line than teachers in other fields. Physical education teachers and coaches of athletics should be particularly cautious and careful to maintain the highest type of personal habits.

The causes which have been given for the failure of teachers are the same things which would cause a person to fail in a great many other occupations. It seems, therefore, that a normal person with intelligence above the average, a pleasing personality, excellent motor ability, and a sincere interest in teaching may reasonably expect to make a success of teaching physical education if he is willing to prepare himself well and work hard and conscientiously at it.

How teachers may cultivate good will. It is generally agreed that one of the most important responsibilities of teachers is to cul-

¹ Elwood R. Cubberley, *Introduction to the Study of Education and of Thinking*, pp. 142-43. Boston: Houghton Mifflin Company, 1925.

² Agnes Snyder and Thomas Alexander, *Teaching as a Profession*, p. 53. Teachers College Bulletin, 23rd Series, No. 8. New York: Teachers College, Columbia University, 1932.

tivate good will toward the work of the school on the part of the patrons of the school. The success or failure of a teacher is frequently determined by his ability to interpret his work to the parents of his pupils. Dean James B. Edmonson of the School of Education, University of Michigan, has prepared the following list of requirements for teachers that parents would set up. He suggests that this list should prove of value in appraising the practices which are of particular significance in cultivating good will in the community.

1. Parents want teachers to treat them with a marked degree of courtesy and respect when they visit the school.
2. Parents want teachers to be sufficiently interested in knowing them as parents to take advantage of opportunities to meet and to talk with them about their children.
3. Parents want teachers to know their children well enough to appreciate their virtues as well as their faults.
4. Parents want teachers to treat their children with dignity and respect, and they particularly resent the use of terms of contempt.
5. Parents want teachers to give them a reasonable amount of warning concerning any unusual expenditure of money for books, supplies, or social affairs.
6. Parents want teachers to inform them concerning any impending crisis in a pupil's school relations before the situation becomes very serious.
7. Parents want teachers to give special attention to the protection of the health of their children.
8. Parents want teachers to emphasize the mastery of certain fundamental skills in reading, writing, and other tool subjects and to emphasize the training of children in certain effective habits of study appropriate to various levels of learning.
9. Parents want teachers to place special emphasis on instruction in matters of honesty, coöperation, respect for the rights of others, purity of speech, and other desirable qualities of conduct.
10. Parents want teachers to train their children in such a way as to enable them to make reasonable progress in their school subjects, and if pupils are not successful they want the teachers to be able to diagnose their difficulties.
11. Parents want teachers to develop a spirit of good will and success in the school groups, so that their children will like to go to school.
12. Parents want teachers to assign home work in such a way that it will be challenging to the pupil's effort and interest.
13. Parents want teachers to express a greater degree of confidence in the children than the parents may seem to possess.

Continuing professional growth. A teacher of physical education must realize that when he graduates from college he has merely the foundation for his professional career. It is essential that he continue to study, to think, and to grow throughout his life. Society

is changing so rapidly and at the same time education is making such rapid strides, that a teacher must study continuously in order to keep abreast of the times.

Some of the things that a physical education teacher should do to stimulate his professional growth are: (1) to read at least one professional book each month; (2) to be a member of his local, state, and national professional organizations; (3) to read regularly the magazines and other publications of his professional organizations; (4) to attend regularly professional meetings, conferences, and conventions; (5) to render service to his professional groups by serving on committees and writing for publication; (6) to carry on research studies which might contribute to the store of organized, authentic data underlying physical education theory and practice; and (7) to continue his professional preparation through extension courses, correspondence work, attendance at summer school, or further graduate study during the regular academic year at a recognized graduate school of education.

It is believed that activities of the types suggested will help one to develop a keener professional spirit, to have a live interest in teaching and in children, to maintain an open mind and tolerant attitude toward new proposals and apparent social change, and to keep on growing throughout life. These things are necessary in order that a teacher may render the most effective service and get the most satisfaction out of his work.

Professional ethics of teachers. The professional ethics of teachers are the fundamental principles of right action between teachers and pupils and between teachers, employers, and the public. It is desirable that these principles be recognized in order that the relationships which are peculiar to teaching may be carried on satisfactorily. Professional ethics are not imposed by any outside authority but develop as the result of the experiences and combined opinions of many teachers. There is usually no organized provision for enforcing the observance of professional ethics; the social pressure of the professional group and the withholding of the privileges of membership in professional organization are the only penalties for violation. No other force is necessary or desirable.

The principles for guiding the human relationships of teachers must be applied in their daily lives by a large number of teachers before these standards can be successfully formulated into codes of ethics. In fact, it is quite doubtful whether merely the formulation of written codes would result in any improvement in the conduct of teachers. It is believed, however, that written statements of approved behavior have much potential value. In order for these values to be realized

it is necessary that there be developed an adequate statement of the standards of conduct which teachers should observe. The provision must be made also for the dissemination and enforcement of these standards.

The National Education Association at the meeting in Atlanta, July, 1929, adopted the following Code of Ethics:

CODE OF ETHICS OF THE NATIONAL EDUCATION ASSOCIATION¹

PREAMBLE

In order that the aims of education may be realized more fully, that the welfare of the teaching profession may be promoted, that teachers may know what is considered proper procedure, and may bring to their professional relations high standards of conduct, the National Education Association of the United States has developed this code of ethics.

ARTICLE I—RELATIONS WITH PUPILS AND TO THE COMMUNITY

SECTION 1. The schoolroom is not the proper theater for religious, political, or personal propaganda. The teacher should exercise his full rights as a citizen but he should avoid controversies which may tend to decrease his value as a teacher.

SECTION 2. The teacher should not permit his educational work to be used for partisan politics, personal gain, or selfish propaganda of any kind.

SECTION 3. In instructional, administrative, and other relations with pupils, the teacher should be impartial, just, and professional. The teacher should consider the different interests, aptitudes, abilities, and social environments of pupils.

SECTION 4. The professional relations of the teacher with his pupils demand the same scrupulous guarding of confidential and official information as is observed by members of other long-established professions.

SECTION 5. The teacher should seek to establish friendly and intelligent coöperation between the home and the school.

SECTION 6. The teacher should not tutor pupils of his classes for pay.

ARTICLE II—RELATIONS TO THE PROFESSION

SECTION 1. Members of the teaching profession should dignify their calling in every way. The teacher should encourage the ablest to enter it, and discourage from entering those who are merely using the teaching profession as a stepping stone to some other vocation.

SECTION 2. The teacher should maintain his efficiency and teaching skill by study, and by contact with local, state, and national educational organizations.

¹ *Ethics in the Teaching Profession*, pp. 88-89. Research Bulletin of the National Education Association, Vol. IX, No. 1. January, 1931. Washington: National Education Association.

SECTION 3. A teacher's own life should show that education does ennoble.

SECTION 4. While not limiting his services by reason of small salary, the teacher should insist upon a salary scale suitable to his place in society.

SECTION 5. The teacher should not exploit his school or himself by personally inspired press notices or advertisements, or by other unprofessional means, and should avoid innuendo and criticism particularly of successors or

SECTION 6. The teacher should not apply for another position for the sole purpose of forcing an increase in salary in his present position. Correspondingly, school officials should not pursue a policy of refusing to give deserved salary increases to their employees until offers from other school systems have forced them to do so.

SECTION 7. The teacher should not act as an agent, or accept a commission, royalty, or other reward, for books or supplies in the selection of purchase of which he can influence or exercise the right of decision; nor should he accept a commission or other compensation for helping another teacher to secure a position.

ARTICLE III—RELATIONS TO MEMBERS OF THE PROFESSION

SECTION 1. A teacher should avoid unfavorable criticism of other teachers except such as is formally presented to a school official in the interests of the school. It is also unprofessional to fail to report to duly constituted authority any matters which involve the best interests of the school.

SECTION 2. A teacher should not interfere between another teacher and a pupil in matters such as discipline or marking.

SECTION 3. There should be coöperation between administrators and classroom teachers, founded upon sympathy for each other's point of view and recognition of the administrator's right to leadership and the teacher's right to self-expression. Both teachers and administrators should observe professional courtesy by transacting official business with the properly designated person next in rank.

SECTION 4. The teacher should not apply for a specific position unless a vacancy exists. Unless the rules of the school otherwise prescribe, he should apply for a teaching position to the chief executive. He should not knowingly underbid a rival in order to secure a position; neither should he knowingly underbid a salary schedule.

SECTION 5. Qualification should be the sole determining factor in appointment and promotion. School officials should encourage and carefully nurture the professional growth of worthy teachers by recommending promotion, either in their own school or in other schools. For school officials to fail to recommend a worthy teacher for another position because they do not desire to lose his services is unethical.

SECTION 6. Testimonials regarding a teacher should be frank, candid, and confidential.

SECTION 7. A contract, once signed, should be faithfully adhered to until it is dissolved by mutual consent. In case of emergency, the thoughtful con-

sideration which business sanction demands should be given by both parties to the contract.

SECTION 8. Due notification should be given by school officials and teachers in case a change in position is to be made.

The report of the committee which presented this Code of Ethics also suggested some procedures for its dissemination and enforcement. The following quotation from this committee report explains some of the methods which might be used for this purpose:

In order that the code (of the National Education Association) may be made known to all teachers, particularly to those who are entering the profession, each institution for the training of teachers should give every student the opportunity of becoming familiar with its provisions. Other practical means for making the code known are by publishing it from time to time in pedagogical magazines, and by discussing it at teachers' institutes and similar meetings.

Each state teachers' organization should establish a committee on professional ethics. This committee should be given the duty of interpreting the code, of investigating reported violations of the code, and of securing the cooperation of all members of the profession in abiding by the code. Each teacher should regard as an obligation the necessity of reporting to this committee any cases of unprofessional conduct which may come under his observation. Before making a decision against the accused the committee should give him an opportunity to be heard. When appropriate to do so, the findings of the committee on such cases should be published in the magazine of the state organization.

Application of Code to physical education. This Code of Ethics of the National Education Association is quite as applicable to teachers of physical education as it is to teachers in any other field. Physical education teachers should probably be more punctilious in the observance of ethical practices than other teachers because of the claims that are made for physical education in regard to the teaching of fair play and other features of good sportsmanship. Each section of the code should be studied carefully and applied to the specific problems which are peculiar to physical education. For example, an interpretation of section 2 in Article I, of section 5 in Article II, and of section 7 in Article II, would indicate that persons engaged in physical education or school and college athletics should not accept gifts from sporting goods dealers, should not for advertising purposes endorse footballs or other articles, and should not sign their names to newspaper stories or books which they do not write. Many persons believe that there is still much truth in the biblical admonition of Moses: "A gift doth blind the eyes of the wise and pervert the words of the righteous."

The satisfaction derived from teaching. It no doubt is true that teaching does not offer as many opportunities to earn a great deal of money as do other professions. There are to be derived from teaching, however, many advantages and satisfactions that other vocations do not have. Teachers usually have a greater degree of security in their positions than do persons in many other lines of work. They have a relatively long summer vacation in which they can study, travel, or possibly earn additional money; they also have the regular school vacations which come at such periods as Christmas and Easter. Teaching as a vocation is also more healthful than many other occupations. The social contacts of teachers are usually with well educated people. It is likewise true that a successful teacher is an admired and respected member of the community in which he teaches.

In addition to these more material advantages a teacher of physical education is in an unusually strategic position to bring happiness and joy to children. It is doubtful that any person with whom children come in contact can be of such direct and effective service in helping them to achieve happiness. Physical education teachers also can exert a great influence on the development of the character and ideals of children. The results of their efforts will be revealed, as the years go by, in the successes which their former pupils achieve. These things bring many satisfactions to successful teachers.

Teaching satisfies the desire of persons to grow and develop intellectually. Teachers have the opportunity to live and work on a level of intelligence and idealism which enables them to be relatively free from envy, avarice, selfishness, superstition, despair, and the other cares and passions which seem to be prevalent among mankind generally. It is their privilege to keep aloft the flag of idealism and the banner of right and truth.

Summary. Teachers render a more important and essential type of social service than any other professional group. Upon the work of the teacher depends the progress of civilization and the stability of organized society. Physical education teachers have the opportunity to serve in elementary schools, high schools, and colleges. Many persons who have professional preparation in physical education also are engaged in recreation work and in organized camping. A person who wishes to prepare to be a teacher of physical education should complete a professional course covering at least four years beyond high school graduation.

The financial income which might be reasonably expected from teaching physical education is less than that from other professions. Within the teaching profession, however, physical education teachers

probably earn more than other teachers and receive higher salaries at an earlier age. Considerable progress has been made in some states in the development and improvement of salary schedules; provisions to make more secure the tenure of teachers; plans for the retirement and payment of pensions to teachers; and adequate state programs for the certification of teachers. Progress along these lines will help to make teaching a more attractive vocation.

Physical education does not have a definite professional status such as the older professions of law, medicine and dentistry. The social and industrial trends in this country indicate that the need of more widespread professional leadership in recreation and physical education will be generally recognized soon. This should result in a better professional status for physical education and better professional opportunities for physical educators.

Superior teaching ability and excellent moral character are two of the most important characteristics of successful teachers of physical education. The lack of these traits and the unwillingness to co-operate with the policies of the school administration have been listed as the three most important reasons why teachers of physical education fail. It is also important that teachers make every reasonable effort to cultivate good will on the part of the school patrons. Maintaining continuous professional growth is essential if a teacher hopes to render the most effective service and advance professionally.

One of the characteristics of a profession is that the members of the group observe in their human relationships a high standard of professional ethics. The National Education Association has adopted a Code of Ethics which should be carefully studied and observed by teachers of physical education.

The financial returns from teaching are not as attractive as those from other professions but teaching provides many advantages and satisfactions that cannot be found in other vocations. Greater security in their positions, more leisure time, educated associates, and dignified and respected standing in one's community are some of the more material and objective advantages of teaching. In addition to these a teacher of physical education has the satisfaction of helping children to be happy; guiding young people in the development of their ideals and character; continuous growing intellectually; and working on a level of intelligence and idealism which enables one to live in terms of the higher and nobler motives of mankind.

QUESTIONS

1. Why is teaching so important in regard to the welfare of mankind, the stability of society, and the progress of civilization?
2. What types of work are open to persons who have professional preparation in physical education?
3. What financial income may be reasonably expected by a person who goes into physical education as a life work?
4. How does the income of teachers compare with that of persons in other professions?
5. What are some developments in some states which indicate that teaching may become more attractive as a vocation?
6. What are some things which teachers of physical education must do in order to secure a real professional status for physical education?
7. If a person prepares to be a teacher of physical education what are his chances of securing a position?
8. What traits and characteristics should a person have who hopes to be a successful teacher of physical education?
9. How may teachers maintain professional growth continuously?
10. What satisfactions, other than financial, may be secured from teaching?

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